Faculty of Medicine

School of Medical Sciences

PATH 3205

Molecular Basis of Disease A
MBD A
(6 UOC)

SESSION I, 2010

CONTENTS

Course objectives

PATH3205 Molecular Basis of Disease A builds on fundamental principles of human disease taught in PATH2201 Processes in Disease. This is achieved in PATH3205 by focusing on the underlying molecular basis or 'molecular mechanisms' of the disease process in humans. Core topics in Pathology and the '*Cutting Edge Research Series'* will use examples and 'state-of-the-art' research techniques that address these molecular mechanisms. Students will have opportunities for interactive learning and engagement in practical and research laboratory settings and upon course completion should have a better understanding of molecular mechanisms that underlie human disease.

Course staff

Department of Pathology, School of Medical Sciences
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Consultation time: Tuesday 2-3pm

Professor N Hawkins (Head of School)
Professor D Wakefield
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Professor M Grimm
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A/Prof N DiGirolamo
Dr N Tedla
Dr S Thomas
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Dr M Dziegielewski
Dr S Champion
Dr B Kan
Dr C van Vliet
Dr S Van Es
Dr M Verma

Guest Lecturers, Faculty of Medicine
A/Prof W Sewell
A/Prof A Torda
Dr J Sullivan
Dr J Post

Guest Lecturers, UNSW
Ms Gwyn Jones, Learning Centre UNSW

Course administration

Administrative and general problems related to your attendance, or the content and conduct of the course, can in the first instance be addressed by consulting Dr Patsie Polly (patsie.polly@unsw.edu.au) by e-mail. Students wishing to see other members of staff should call in at the School office (ground floor, MG14) and make an appointment with the assistance of the staff. If students have difficulties of a personal nature, or with the course, they should contact the School's Grievance Officer, Dr P Pandey or Prof N Hawkins, the Head of School.

Should you feel that there are particular circumstances that have affected your performance in the course; you should lodge an application for special consideration. The procedures involved in this are outlined in the UNSW Student Guide, and special forms are widely available on campus e.g. Student Health Centre, Student Centre.

Information on the different research units in the Department of Pathology and the research interests of each staff member is available at Department of Pathology's home page at http://medicalsciences.med.unsw.edu.au/

All students in course PATH3205 are advised that email is the official means by which the School of Medical Sciences at UNSW will communicate with you. All email messages will be sent to your official UNSW email address (e.g., z1234567@student.unsw.edu.au) and, if you do not wish to use the University email system, you MUST arrange for your official mail to be forwarded to your chosen address. The University recommends that you check your mail at least every other day. Facilities for checking email are available in the School of Medical Sciences and in the University library. Further information and assistance is available from DIS-Connect, Tel 9385 1777. The UNSW Library runs free email courses.

Course details

This course is offered during Semester I and counts for six units of credit (6OC). PATH2201/PATH2202 (Processes in Disease/Processes in Disease for Health and Exercise) are prerequisites for the course. It is also advantageous for students to have undertaken previous study in ANAT3231 Cell Biology.

Course aims

The course **PATH3205 Molecular Basis of Disease A** aims to:

1. Promote understanding of the molecular basis of inflammation, responses to infection, allergy, autoimmunity, and diseases of the cardiovascular and respiratory systems. These concepts are introduced in the context of common human diseases or disease processes.
2. Relate the above concepts of processes in human disease to biomedical research via the '*Cutting Edge Research Series*' which provides introductory lectures on relevant areas of medical research, as well as associated laboratory-based workshops.
3. Develop oral and written communication skills which underpin dissemination of discoveries in human disease via medical research.

These aims will be achieved by specialist teaching of core concepts and research techniques by academic pathologists who are clinically and/or scientifically trained.

The course aims integrate molecular aspects of human disease into the context of histopathology and macroscopic specimens for each above mentioned disease topics. Furthermore, course aims mesh well with other disciplines including Anatomy, Biochemistry, Immunology, Microbiology, Pharmacology and Physiology.

Student learning outcomes

At the completion of this course, you should be able to:

1. Describe the causes, pathogenetic mechanisms, macroscopic and microscopic appearances and clinical consequences of inflammation, responses to infection, allergy, autoimmunity, and diseases of the cardiovascular and respiratory systems.
2. Work in collaborative teams to communicate concepts of disease in an oral presentation to non-specialist audiences.
3. Work independently to communicate, report and evaluate an assigned '*Cutting Edge Research Topic*' in the written form by using specialist scientific journal articles and information from the *Cutting Edge Research Series*.
4. Understand the relevance of laboratory techniques in the diagnosis of human disease.

Learning and teaching rationale

The intended learning outcomes are achieved through study of the common patterns of response to injury, which are often referred to as pathological processes. To understand these processes, you will draw on your knowledge of normal anatomy, histology, biochemistry and physiology. PATH2201 Processes in Disease has introduced the fundamental concepts for the specific diseases to be addressed in PATH3205. This will involve more detailed discussion of recent advances in knowledge pertaining to the molecular basis of inflammation and infection, autoimmunity and diagnostic techniques.

Future directions
The course complements PATH3206 Molecular Basis of Disease B which is run in Session 2 of the same academic year. For those wishing to pursue a career in research or hospital based laboratory work, the course will not only develop their basic knowledge of molecular processes, but also provide a framework for understanding how these processes link to the modern practice of medicine and medical research. Similarly, for those who may wish to pursue a career in the health sciences, the course will provide an understanding of the cellular and molecular processes underlying the clinical manifestations of disease.

Teaching strategies

The course comprises of lectures, tutorials, practical classes, '*Cutting Edge Research Series*' and assignments, which cover the general and specialist aspects of the molecular basis of disease.

Core topics in Pathology
The core lecture series focuses on specific diseases such as meningitis, HIV and diabetes. The tutorials are designed to be complementary to lectures and place these topics in the larger context of human disease. A list of aims and objectives is included for each lecture and tutorial, along with points for discussion and a list of suggested additional resources available on the web.

'*Cutting Edge Research Series*'
The course also includes several '*Cutting Edge Research Series*' topics that, as the name would suggest, focuses on the most recent research advances in molecular medicine. This section of the course is an innovation for the Department of Pathology and introduces the 'world of medical research' by way of specialist lectures that directly relate to research workshop laboratories; demonstrating 'state-of-the-art' molecular techniques that are key in disease diagnosis. We hope it will provide you with an exciting and challenging glimpse of current approaches in medical research.

The course covers a lot of new material and will require diligence and application to succeed. The learning objectives for each activity (documented in the PATH3205 Student Manual) provide a focus for your study and should be reviewed with each topic. Ongoing assessment throughout the term includes the 'Cutting Edge Research' written assignment, a group presentation using PowerPoint which fosters oral communication skills in medical science and two on-line self-assessment activities to provide you with feedback about your progress. In addition, evaluation questionnaires will be distributed at various points during the PATH3205 in order to provide us with feedback on your experiences of the course. We hope that you will find the course both challenging and enjoyable and look forward to working with you over the coming semester and to hearing your comments on the course.

Practical classes and tutorials in Molecular Basis of Disease A are aimed at amplifying and extending your understanding of the core topics gleaned from attendance at lectures and reading of the recommended text, as well as correcting any misconceptions. Hence, adequate preparation and active participation are essential.

Practical classes will reinforce clinico-pathological correlation related to each core topic. These classes are intended to help you to acquire the ability to recognise the macroscopic and microscopic features of diseased tissue, and to relate the lesions to clinical manifestations of disease. The format of each practical class will be at the discretion of the tutor. Macroscopic "pots" will be generally used in conjunction with virtual microscopic slides, x-rays and other materials.

Research experience

Opportunities exist for all students wishing to undertake undergraduate and postgraduate research program within the School of Medical Sciences. Information can be accessed via the directory for the School of Medical Sciences at:
http://www.med.unsw.edu.au/medweb.nsf/page/home?OpenDocument

Assessment

The breakdown of assessments in the course is as follows:

Group presentation	25%
Cutting Edge Essay'	20%
On-line progress assessments (x2)	5%
Practical Examination	10%
Final examination (2 hours)	40%

Group project ***(25%)***

Students will work in groups to prepare a 15 minute PowerPoint presentation on a topic to be allocated in week 2, S1. Several one-hour sessions will be set aside for students to present their work to the rest of the group. One student from each group will designated to deliver the presentation by random draw (so all students must come prepared), and the remaining students in the group will be responsible for answering questions relating to the presentation.

Prior to the formal student presentations, The Learning Centre will run two presentation skills sessions and a follow-up session. This is an important part of developing skills for the group project.

The group project will be assessed by peers and academics. The peer assessment mark will weigh 10% and the academic assessment mark will weigh 90% of the total mark for this assessment. Sample assessment forms are included below.

Cutting Edge Essay ***(20%)***

Students will be required to complete a 1500 word essay on one of the '*Cutting Edge Series*' topics. Essay topics will be distributed to students in **week 8**. Essay topics may not be exchanged between students. Completed essays must be returned to the School of Medical Sciences office (room MG14, ground floor, Wallace Wurth) in **week 12** by 4pm on Friday 28th May. Topics will be allocated by a random draw. Late essays will attract a penalty of 10% of the essay mark per week or part thereof.

The essays will be marked according to the following criteria:

1) Demonstrates an understanding of the topic and how it fits into the broader research area.
2) Demonstrates knowledge of research methodology and correct application of this to the research question.
3) Demonstrates an understanding of the limitations of the technology or model.
4) Directly addresses the question posed in the topic.
5) Demonstrates an ability to access the current medical literature to gain further information and utilise this in support of an argument.
6) Correctly uses references in the essay and provides an appropriate reference list.

The report will be marked out of 20. For **each** of the above objectives marks will be distributed as follows:

- Did not address the objective 0
- Attempted to address objective but did not achieve satisfactory standard 1
- Satisfactorily addressed objective 2
- Addressed objective well 3

In addition, up to 2 further marks may be awarded for a consistent and / or exemplary performance overall.

Sample question:
Please comment on the following statement:
'The prevention of arterial graft restenosis has been demonstrated in the pig.
Comment on potential differences between the pig model and human disease, and the problems these differences may pose for human use of this technology.'

PATH3205 Group Presentations - Peer Assessment Form

Group No. AA

Topic Autoimmune haemolytic anaemia

Group members

XXX
XXX
XXX

Student Assessors (Group Y)

Name……

Sign……

Name……

Sign……

Name……

Sign……

	0	**1**	**2**	**3**	**4**
Clear explanation of disease process					
Structure of content – introduction, logical flow, conclusions					
Effective use of PowerPoint to deliver presentation					
Ability to answer questions					
Overall impression					
Subtotal					
Total					

Comments:

PATH3205 Group Presentations – Academic Assessment Form

Group No. AA
Topic Autoimmune haemolytic anaemia

Group members

XXX
XXX
XXX

	0	1	2	3	4
Clear explanation of disease process					
Structure of content – introduction, logical flow, conclusions					
Effective use of PowerPoint to deliver presentation					
Ability to answer questions					
Overall impression					
Subtotal					
Total					
Comments Strengths Improvement Points for clarification (if necessary)					

Assessor: …… (sign). **Date:** ……

On-line assessments ***(5%)***

Students will be offered two online assessments during the course. These are to be completed **during the 10 days in which each is available (students will be notified in lectures when this will be)**. The assessments will include objective items in the same style as the final examination. Students may attempt the assessments as often as they wish within the time allowed until they receive a satisfactory score (>90%). The aim of these assessments is to provide students with feedback on their progress rather than to rank students. Students will receive 2.5% of the total mark for satisfactory completion of **each** of the assessments.

Practical examinatiom ***(10%)***

Students will complete a practical examination during the **final week** of term (scheduled into normal teaching time). This will consist of a series of 6 stations each with questions based on material presented during term. Students will rotate around the stations, spending 5 minutes per station.

Final examination ***(40%)***

Students will complete a two-hour written exam at the **end of session** that will contribute 40% of their overall mark. This will include objective items and five short answer questions. Some of the short answer questions may be directly from the Trial Examination Questions in the manual, the learning objectives or the on-line self-assessment. Marks will be weighted as follows:

Short answer	30%	(5 x 15 mins each)
Objective items	10%	

The short answer questions vary in style, but are intended to provide you with the opportunity to demonstrate your understanding of the topic and your ability to integrate ideas rather than simple “regurgitation of facts”.

Supplementary examination

If required, a supplementary examination will be scheduled in the week commencing Monday 19th July. Special considerations sought outside the 3 day time period WILL NOT be accepted except in TRULY exceptional circumstances.

Sample examination paper

SAMPLE EXAMINATION FORMAT FOR 2010

(1) TIME ALLOWED : 2 HOURS.

(2) ANSWER ALL QUESTIONS.

(3) ANSWER PART A QUESTIONS ON SEPARATE PAGES. WRITE CLEARLY IN INK.

(4) ANSWER PART B USING THE TRUE-FALSE ANSWER SHEET PROVIDED.

(5) ANSWER PARTS C AND D USING THE GENERALISED ANSWER SHEET PROVIDED.

(6) THIS PAPER MAY NOT BE RETAINED BY THE CANDIDATE.

PART A (75 marks)

1. Discuss the pathways by which bacterial toxins produce fever.

(15 marks)

2. Why do patients develop such a rapid response to bacteria such as *Staphylococcus aureus* while the response to *Mycobacterium tuberculosis* is delayed?

(15 marks)

3. How do antigen-antibody complexes cause inflammation in systemic lupus erythematosus?

(15 marks)

4. Discuss the following statement:
   If everyone else in Australia vaccinates their children, it is best not to vaccinate yours (as long as you are the only person who thinks this way).

(15 marks)

5. Discuss the following statement:
   Heart disease is primarily a disease of middle aged and older people. Therefore, people should not be concerned about exercise, blood pressure or diet until they reach their forties.

(15 marks)

PART B (13 marks)

This part of the examination consists of statements, which you are required to identify as true or false. On the supplied true-false answer sheet, **FILL IN** the circle for T(rue) or F(alse) under the letter **A** for each numbered statement. Do **NOT** use the T or F circles under letters B-E. **USE PENCIL**. This part of the examination has negative marking: you will score +1 for each correctly identified statement, –1 for each incorrectly identified statement and 0 for each omitted statement.

1. Lipopolysaccharide (LPS) may directly activate complement.

2. The frequency of complications from measles vaccination in an individual patient exceeds the frequency of complications if they were infected with measles virus itself.

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.3. CD4+ T-helper cell depletion leads to a high incidence of bacterial meningitis in patients with HIV/AIDS.

PART C (6 marks)

This part of the examination consists of 3 questions, each of which includes an assertion and a reason. Select your answer based on the following:

(A) if both the assertion and the reason are correct AND the reason is a correct explanation of the assertion

(B) if both the assertion and the reason are correct BUT the reason is not a correct explanation of the assertion

(C) if the assertion is true but the reason is false

(D) if the assertion is false but the reason is true

(E) if both the assertion and the reason are false.

On the supplied generalised answer sheet, **FILL IN** the corresponding circle**. USE PENCIL**. You will score 2 for each correct answer and 0 for each incorrect or omitted answer.

1. Histamine plays an important role in the initial phase of acute inflammation **BECAUSE** it is rapidly released and acts on the microcirculation.

2. Activation of the complement cascade facilitates phagocytosis of bacteria by neutrophils **BECAUSE** these cells have receptors for C3a and C5a, which are complement components that coat the surface of the organisms.

3. Persisting infection by pyogenic bacteria usually gives rise to a granuloma **BECAUSE** granulomatous inflammation is often driven by a host immunological response.

PART D (6 marks)

This part of the examination consists of 3 questions, each containing 5 statements. For each question, select the **BEST or MOST APPROPRIATE** answer from among the alternatives. On the supplied generalised answer sheet, **FILL IN** the corresponding circle. **USE PENCIL**. You will score 2 for each correct answer and 0 for each incorrect or omitted answer.

4. **The most important effects of meningococcal septicaemia result from:**
   - (A) Formation of antigen-antibody complexes and initiation of the complement cascade.
   - (B) The ability of the bacteria to exit the blood stream and colonise the meninges.
   - (C) The effects of LPS on macrophages promoting the release of TNF.
   - (D) A direct toxic effect of LPS on the myocardium.
   - (E) Formation of septic infarcts in multiple organs including the kidney.

5. **The most important clinical effects of rheumatic fever result from:**
   - (A) destruction of myocardial cells by Streptococcus pyogenes infection
   - (B) inflammation of the valve rings, leaflets and chordae tendinae
   - (C) fibrosis of the valve rings, leaflets and chordae tendinae
   - (D) ventricular and supraventricular arrhythmias
   - (E) pericarditis and pericardial tamponade.

6. **The most important differences between the AIDS epidemic in USA and Africa result from:**
   - (A) increased mortality in Africa due to low levels of health care
   - (B) increased heterosexual transmission of HIV in Africa
   - (C) higher incidence of tuberculosis in Africa leading to earlier AIDS diagnosis
   - (D) the presence of HIV-2 in Africa
   - (E) the effects of anti-retroviral drugs on decreasing HIV transmission.

Answers to objective items

PART B : 1-True, 2 – False, 13 - False
PART C: 1. A; 2. C; 3. D
PART D: 4. C; 5. C, 6. B

Academic honesty and plagiarism

What is Plagiarism?
Plagiarism is the presentation of the thoughts or work of another as one's own.* Examples include:

- direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

For the purposes of this policy, submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered to be plagiarism.

Note that an assessment item produced in oral, not written, form, or involving live presentation, may similarly contain plagiarised material.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:

www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle
† Adapted with kind permission from the University of Melbourne.

The School of Medical Sciences will not tolerate plagiarism in submitted written work. The University regards this as academic misconduct http://www.student.unsw.edu.au/academiclife/assessment/academic_misconduct.shtml and imposes severe penalties. Evidence of plagiarism in submitted assignments, etc. will be thoroughly investigated and may be penalised by the award of a score of zero for the assessable work. Flagrant plagiarism will be directly referred to the Division of the Registrar for disciplinary action under UNSW rules.

The attention of students is drawn to the following extract from the above website:
"The basic principles are that you should not attempt to pass off the work of another person as your own, and it should be possible for a reader to check the information and ideas that you have used by going to the original source material. Acknowledgment should be sufficiently accurate to enable the source to be located speedily."
"The following are some examples of breaches of these principles:
a) Quotation without the use of quotation marks. It is a serious breach of these rules to quote another's work without using quotation marks, even if one then refers to the quoted source. The fact that it is quoted must be acknowledged in your work.
b) Significant paraphrasing, e.g., several sentences, or one very important sentence, which in wording are very similar to the source. This applies even if the source is mentioned, unless there is also due acknowledgment of the fact that the source has been paraphrased.
c) Unacknowledged use of information or ideas, unless such information or ideas are commonplace.
d) Citing sources (e.g., texts) which you have not read, without acknowledging the 'secondary' source from which knowledge of them has been obtained."

Appropriate citation of sources therefore includes surrounding any directly quoted text with quotation marks, with block indentation for larger segments of directly-quoted text. The preferred format for citation of references is an author-date format with an alphabetically arranged bibliography at the end of the assignment. Note that merely citing textbooks or website URLs is unlikely to yield a bibliography of satisfactory standard. ***The internet should be avoided as a primary source of information***. Inclusion of appropriate journal articles, both primary research publications and reviews, is usually expected.

Course Timetable

NOTE: Changes in the timetable will be announced on Blackboard.
All locations are within the Wallace Wurth Building.

Week	Date	Time	Location	Lecturer	Title
2	Tues 9/3	11	LG03	Polly	Introduction to Molecular Basis of Disease A ** *presentation topics announced***
		12	LG03	Velan	Molecular basis of meningitis I
	Wed 10/3	10	LG03	Velan	Molecular basis of meningitis II
		11	Tutorial rooms: 106/108, 109/110	*see allocation*	Tutorial 1 – Acute inflammation
3	Tues 16/3	11	LG03	Geczy	Understanding innate and cell-mediated immune systems
		12	LG03	Lloyd	Cellular pathology of tuberculosis I
	Wed 17/3	10	LG03	Lloyd	Cellular pathology of tuberculosis II
		11	Tutorial rooms: 106/108, 109/110	*see allocation*	Tutorial 2 – Chronic inflammation
4	Tues 23/3	11	LG03	Sewell	Molecular basis of allergy
		12	G2/G4	Dziegielewski	Museum study session 1 - Acute inflammation
	Wed 24/3	10	LG03	Polly	*Cutting Edge A, lecture*
		11	Teaching Labs: 109/110	Polly	*Cutting Edge A, research workshop*
5	Tues 30/3	11	LG03	Kumar	Molecular basis of asthma
		12	G2/G4	Dziegielewski	Museum study session 2 – Acute and Chronic inflammation
	Wed 31/3	10	LG03	Jones/Polly	Science communication I: Presentation and collaborative learning skills
		11	Tutorial rooms: 106/108, 109/110	*see allocation*	Tutorial 3 – Allergy and asthma
			Mid Session Break		
6	Tues 13/4	11	LG03	Post	HIV, the virus and its effects I
		12	LG03	Post	HIV, the virus and its effects II
	Wed 14/4	10	LG03	Thomas	*Cutting Edge B, lecture*
		11	Teaching Labs: 109/110	Thomas	*Cutting Edge B, research workshop*
7	Tues 20/4	11	LG03	Kumar	Smoking and the lung
		12	LG03	Jones/Polly	Science communication II: Presentation and collaborative learning skills
	Wed 21/4	10	LG03	Grimm	Molecular basis of coeliac disease
		11	Tutorial rooms: 106/108, 109/110	*see allocation*	Tutorial 4 – HIV
8	Tues 27/4	11	LG03	Wakefield	Autoimmune disease I
		12	LG03	Wakefield	Autoimmune disease II ***On-line assessment***
	Wed 28/4	10	LG03	DiGirolamo	*Cutting Edge C, lecture*
		11	Teaching Labs: 109/110	DiGirolamo	*Cutting EdgeC, research workshop* *****Essay topics allocated on WebVista***
9	Tues 4/5	11	LG03	Torda	Principles of immunisation
		12	LG03	John	Transplantation: Tolerance and rejection
	Wed 5/5	10	LG03	Hawkins	Rheumatic heart disease
		11	Tutorial rooms: 106/108, 109/110	*see allocation*	Tutorial 5 - Autoimmune disease & transplantation
10	Tues 11/5	11	LG03	Polly	Student presentations
		12	LG03	Polly	Student presentations
	Wed 12/5	10	LG03	Polly	Student presentations
		11	G2/G4	Wakefield	Practical class - Autoimmunity
11	Tues 18/5	11	LG03	Polly	Student presentations
		12	LG03	Polly	Student presentations ***On-line assessment***
	Wed 19/5	10	LG03	Polly	Student presentations
		11	G2/G4	Geczy /Verma	Practical class - Diagnosis of disease

12	Tues 25/5	11	LG03	Jessup	Cardiovascular disease I
		12	LG03	Jessup	Cardiovascular disease II
	Wed 26/5	10 11	G2/G4 Tutorial rooms: 106/108, 109/110	Kumar *see allocation*	Practical class - Cardiovascular and respiratory disease Tutorial 6 – Cardiovascular disease *****Essays due 28/5/2010*****
13	Tues 1/6	11	LG03	Polly	'Feedback'
		12	G2/G4	Dziegielewski/ Verma	Museum study session 3 - Cardio-respiratory disease
	Wed 2/6	10 11	G2/G4, 106/108 G2/G4, 106/108	Polly	** Practical examination **

KEY:

Digirolamo	A/Prof Dr Nick Digirolamo	Centre for Infection and Inflammation Research (CIIR;Pathology)
Dziegielewski	Dr Mark Dziegielewski	Department of Pathology, UNSW
Geczy	Prof Carolyn Geczy	Department of Pathology, UNSW
Grimm	Prof Michael Grimm	Department of Pathology, UNSW and St George Hospital
Hawkins	Prof Nick Hawkins	Department of Pathology, UNSW, Head of SoMS
Jessup	Prof Wendy Jessup	Centre for Thrombosis and Vascular Research (CVR; Pathology)
Kumar	Prof Rakesh Kumar	Department of Pathology, UNSW
Lloyd	Prof Andrew Lloyd	Center for Infection and Inflammation Research (CIIR;Pathology)
Polly	Dr Patsie Polly	Department of Pathology, UNSW
Post	Dr Jeffrey Post	Department of Pathology, UNSW and Prince of Wales Hospital
Sewell	A/Prof Bill Sewell	St Vincent's Hospital
Thomas	Dr Shane Thomas	Department of Pathology, UNSW and CVR (Pathology)
Torda	Dr Adrienne Torda	Prince of Wales Clinical School
Tuch	Dr John Sullivan	Children's Cancer Institute Australia
Velan	A/Prof Gary Velan	Department of Pathology, UNSW
Verma	Dr Manju Verma	Department of Pathology, UNSW
Wakefield	Prof Denis Wakefield	Department of Pathology, UNSW

Resources for students

You are expected to acquire the following text:
Basic Pathology, 8th Ed. V. Kumar, R. Cotran & S Robbins (2007). Saunders & Co.

Students wishing to study the molecular biology or clinical features of diseases in greater depth might consider the purchase of the following text:

Robbins and Cotran Pathologic Basis of Disease. 8th edition. Ed. V. Kumar, A.K. Abbas N. Fausto and J. Aster. (2009) Elsevier Saunders.

PATH3205 Student Manual

The PATH3205 Student Manual clearly outlines the learning objectives for each tutorial topic and practical class. Although these learning objectives may not all be covered within a particular class it is imperative that you address each of these issues during your own period of study and revision. Trial examination questions are included where appropriate, so that you can assess your own progress by answering the question pertaining to the relevant topic at the end of each week.

The Pathology Manual contains a large amount of valuable information that will facilitate your study. In particular you should become familiar with the Glossary of Terms and the Table of Reference Ranges in Pathology.

In addition, there are many resources available on the web, which vary from simple patient information brochures to on-line pathology courses to information on the latest research. Some general sites you may find useful are:

Centre for Disease Control (see especially ‘health topics A-Z’)
http://www.cdc.gov/

University of Utah (tutorials and images on many of the topics covered)
http://library.med.utah.edu/WebPath/webpath.html#MENU

Medline Plus (‘health topics’ index of diseases with information)
http://www.nlm.nih.gov/medlineplus/healthtopics.html

Other resources are indicated for some lectures in the PATH3205 Student Manual.

PATH 3205 Blackboard Module

Students enrolled in PATH3205 will be able to access the timetable, lecture notes and related information online via Blackboard (login with zPass):
http://lms-blackboard.telt.unsw.edu.au/

The Museum of Human Disease

The Donald Wilhelm Museum of Human Disease is located on the ground floor of the Samuels Building (Building F25). Originally located on the 5th floor of the Wallace Wurth Building, it was established by Professor Donald Wilhelm, the Foundation Professor of Pathology at this university. Thanks to his foresight, and to the tireless efforts of Dr G. Higgins (the Museum Curator until 2004), the Museum has been meticulously maintained and updated over the years to reflect the changing patterns of disease in our society. The Museum contains over 2,700 specimens (or "pots"), which display diseased human tissue at the macroscopic level, usually preserved in formalin. Specimens are obtained both from organs removed surgically and from tissue obtained at autopsy, where the natural history of disease is in full view. **Please take note that some specimens of diseases which have become rare, e.g. diphtheria, are over 60 years old, and are irreplaceable.** Each specimen is numbered and is accompanied by a clinical history (when known), a macroscopic description of the abnormalities displayed, and a histopathological description of changes at the microscopic level (where relevant). That information, specific to each of thirty areas (or "bays"), can be found in the Museum catalogues located in a bracket within each bay.
All the specimens in the museum are arranged in one or other of two major groups. One group comprises collections of specimens according to pathological processes such as congenital, inflammation and healing, vascular, neoplasia etc. The second group comprises collections of specimens under organ systems, such as cardiovascular, central nervous, renal etc. As responsible adults, we expect you to maintain decorum in the Museum, behave with care and respect for the integrity of the specimens, and help to keep the Museum tidy at all times. This means no eating or drinking in the Museum, and always returning specimens and catalogues to their allocated places. **Do not shake the pots!** This activity conveys no useful information, but often damages the specimens. If you discover that a specimen is leaking or broken, follow the instructions listed in the safety notice below. **Remember that the Museum is a precious learning resource, of which you are encouraged to make full use**.

Security in the museum

It is a crime under the Human Tissue Act to steal or mistreat material preserved in the Museum or practical class laboratories. Anyone who contravenes the Act will be prosecuted.
In order to protect the collection of specimens, access to the Museum is restricted for students in 3rd and 4th Year Medicine and PATH3206 during weekdays from 8 a.m. to approximately 8 p.m. The Museum is security locked, and can only be entered by using your student card to enable the doors to be opened. Mr Lansdown and Mr Mitchell play a supervisory role during office hours.
The Museum and practical class laboratories are under constant electronic surveillance.

Safety in the museum

- Always handle museum specimens with care and respect. All specimens consist of generously donated human tissue.
- The specimens are preserved in fixative solutions which contain a variety of toxic compounds:

Chemical	Percentage Composition

Glycerol	1.6 (v/v)
Saturated Camphor in Ethanol	0.16 (v/v)
Sodium Acetate	0.08 (w/v)
Formalin	0.16 (v/v)
Sodium Dithionate	0.25 (w/v)

- For reasons of hygiene, never take food or drink into the museum.
- Never leave a museum specimen on the floor, or in any precarious position.
- If a specimen is leaking, turn it upside down to prevent further leakage, then immediately inform Mr Alan Mitchell or a member of academic staff.
- If a specimen is broken, do not attempt to wipe up the spillage. Use the kitty litter provided in the central cupboards to absorb the fumes, then clear the area and immediately inform Mr Alan Mitchell or a member of academic staff.
- Remember that the museum is here for your benefit - your cooperation in maintaining neatness and safety at all times is appreciated.
- For more information on matters related to occupational and health safety policies of the UNSW visit the following web site. www.riskman.unsw.edu.au/ohs/ohs.shtml

Those students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course convener prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (9385 4734 or www.equity.unsw.edu.au/disabil.html). Issues to be discussed may include access to materials, note-takers, the provision of services and additional examination and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found at:
www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf

Continual course improvement

Periodically student evaluative feedback on the course is gathered, using UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process and in-house course evaluation questionnaires. These questionnaires are available on-line where students are requested to provide feedback on the course. Student feedback is taken seriously, and continual improvements are made to the course based in part on such feedback.

Administrative Matters

You may also meet the following members of the School support staff during the course of the year:

Ms Soo Han Chup
Position: Administrative Officer
Location: Administrative Wing, Room MG14, Ground floor Wallace Wurth Building
Ms Chup is responsible for the distribution of Pathology manuals and Images of Disease CD-ROMs to students, and will assist in arranging interviews with academic staff within the Department.

Ms Carmen Robinson
Position: Administrative Officer
Location: Administrative Wing, Room MG14, Ground floor Wallace Wurth Building
Ms Robinson is responsible for general administration and student support within the School of Medical Sciences.

Mr Gavin Mackenzie

Position: Technical Officer
Location: Room M101, Wallace Wurth Building
Mr Mackenzie is responsible for the production and distribution of histopathology slides for use in practical classes.

Mr Robert Lansdown
Position:Museum Manager
Location: Room G04 Ground Floor Samuels Building, Building F25
Mr Lansdown provides support for all undergraduate teaching programs. He plays a major role in broadening the use of the Museum of Human Disease by supervising an integrated learning program for senior high school students and community interest groups. Mr Lansdown co-ordinates a network of volunteers, who assist with the supervision of visitors from outside the University.

Ms Francesca Cato
Position:Museum Education Officer
Location: Room G04 Ground Floor Samuels Building, Building F25
Ms Cato provides support for all undergraduate teaching programs, and assists in delivering an integrated learning program for senior high school students and community interest groups.

Mr Alan Mitchell
Position:Museum Technical Officer
Location: Room G06 Ground Floor Samuels Building, Building F25
Mr Mitchell is responsible for the mounting and maintenance of Pathology Museum specimens, both on campus and in the associated teaching hospitals. Contact Mr Mitchell immediately if there are any broken or leaking specimens in the Museum.