UNSW SYDNEY | Australia's Global University

Faculty of Medicine

School of Medical Sciences

PATH2201

PROCESSES IN DISEASE

&

PATH2202

PROCESSES IN DISEASE FOR HEALTH AND EXERCISE SCIENCE

COURSE OUTLINE

SEMESTER 2, 2017

CRICOS Provider Code 00098G

Table of Contents

Please read this manual/outline in conjunction with the following pages on the School of Medical Sciences website:

- Advice for Students
- Learning Resources

(or see "STUDENTS" tab at medicalsciences.med.unsw.edu.au)

Information about the Course

NB: Some of this information is available in the UNSW Handbook

Year of Delivery	2017
Course Code	PATH2201 / PATH2202
Course Name	Processes in Disease Processes in Disease for Health and Exercise Science
Academic Unit	School of Medical Sciences
Level of Course	Stage 2, Undergraduate
Units of Credit	6 UOC
Session(s) Offered	Semester 2
Assumed Knowledge, Prerequisites or Co-requisites	PATH2201: ANAT2241 plus any one of ANAT2111, ANAT1521, PHSL2101, BIOC2101 and BIOC2181 PATH2202: ANAT2111, BIOC2181 and PHSL2501
Hours per Week	4-5 hours
Number of Weeks	12 weeks (plus revision in week 13)
Commencement Date	25th Jul 2017

Summary of Course Structure (for details see 'Course Schedule')				
Component	**HPW**	**Time**	**Day**	**Location**
Lectures	1-2	9-11 am	Thursday	Rex Vowels
Online modules	1	Freely accessible from the commencement of each topic		
Laboratory	2			
Lab – Histopathology* (PATH2201 students only)		11-1 pm	Thursday	G06/G07
Lab – Macroscopic pathology* (PATH2201 students only)		11-1 pm	Thursday	G08 OR G16/G17
Lab – Clinicopathological (PATH2202 students only)		1-3 pm	Thursday	G06/G07
Tutorials	1	4-5 pm or 5-6 pm	Tuesday	TBA
TOTAL	4-5			
Special Details	* PATH2201 students attend Histopathology and Museum laboratory classes on alternating weeks			

Staff Involved in the Course

Staff	Name	Contact Details
Course Convenor (PATH2201/PATH2202)	Dr Cristan Herbert	Room 417, level 4 east Wallace Wurth Building (02) 9385 8679 C.Herbert@unsw.edu.au
Course Co-Convenor	To be confirmed	
Lecturers	Prof Gary Velan	G.Velan@unsw.edu.au
	Prof Rakesh Kumar	R.Kumar@unsw.edu.au
	A/Prof Nicodemus Tedla	N.Tedla@unsw.edu.au
	Dr Karim Burkhardt	K.Burkhardt@unsw.edu.au
	Dr Chaturaka Rodrigo	C.Rodrigo@unsw.edu.au
	A/Prof Patsie Polly	Patsie.Polly@unsw.edu.au
	Ms Gywn Jones	Gwyn.Jones@unsw.edu.au
Tutors & Demonstrators	TBA	
Museum Manager	Mr Derek Williamson	Derek.Williamson@unsw.edu.au
Student Administrative Officer	Nadia Ghafoorzada Dylan Lewis	SOMSenquiries@unsw.edu.au

Consultation time (Course convenor): Monday 3 – 5 pm

Academic and Administrative enquiries

For administrative and general enquiries related to your attendance or the content and conduct of the course, students enrolled in PATH2201 or PATH2202 should consult Dr Herbert by email (C.Herbert@unsw.edu.au) copied to the co-convenor. Students wishing to see their tutors or other members of staff should refer to the tutorial class allocation and tutor contact details which will be available on Moodle after the commencement of the course.

Email Etiquette

When emailing staff, ensure the subject line begins with PATH2202, followed by the subject of the message (e.g., PATH2202 Practical classes). Ensure that you include your student number in your email.

Students are advised that email is the official means by which the School of Medical Sciences at UNSW will communicate with you. All emails will be sent to your official UNSW email address (e.g., z1234567@student.unsw.edu.au), otherwise 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 the University library. Further information and assistance is available from IT Service Centre on 9385 1333.

Course Details

Lectures, online modules, tutorials and practical classes aimed at increasing understanding of important disease processes. Comparisons between normal and abnormal cell, tissue and organ function will be made. These include processes of cell and tissue degeneration, acute and chronic inflammation, healing, vascular disease and neoplasia. Particular examples include diseases of practical importance such as pneumonia, tuberculosis, pulmonary embolism and myocardial infarction. Examples of common tumours will be introduced to demonstrate aberrations of cell growth and neoplasia.

PATH2201 /PATH2202 are 6 UOC courses, which is available in Semester 2 only. These courses are prerequisites for Stage 3 courses offered by the Department of Pathology, for which a major in Pathology is available. Please see the UNSW online handbook for details. The course is suitable for students who plan a career in research, hospital based laboratory work, and professions in the health sciences.

Course Aims[1]

PATH2201 Processes in Disease /PATH2202 Processes in Disease for Health and Exercise Science have been developed to provide students with a broad understanding of the pathological basis of human disease, through study of the fundamental causes of disease at a macroscopic, microscopic and molecular level. The general purpose of these courses is to introduce students to the scientific approach to the study of disease.

The aims of the course are to:

1. Understand the pathological processes that underlie common human diseases.
2. Integrate and build on students' knowledge of anatomy (normal structure at a gross level), histology (normal structure at a microscopic level) and physiology (normal function), by comparing normal structure and function with abnormalities caused by disease.
3. Introduce students to the terminology of pathology, in order to facilitate communication in future health-related education, research or clinical practice.
4. Provide a basis for understanding and interpretation of clinical scenarios students may encounter in future practice.
5. Guide and improve students' ability to utilise appropriately the medical literature, facilitated by a scientific literacy workshop, a media assignment (see Assessment section) and the structure of tutorials.

Student Learning Outcomes[2]

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

1. Describe the causes, pathogenic mechanisms, macroscopic and microscopic appearances and clinical consequences of common diseases affecting humans.
2. Outline the causes, mechanisms and consequences of the following pathological processes:
    a. Acute inflammation
    b. Chronic inflammation and healing
    c. Vascular disease
    d. Neoplasia

[1] Learning and Teaching Unit: Course Outlines
[2] Learning and Teaching Unit: Learning Outcomes

3. Apply knowledge of pathological processes to common examples of specific human diseases, which include:

    a. Acute appendicitis
    b. Pneumonia
    c. Tuberculosis
    d. Peptic ulcer disease
    e. Atherosclerosis
    f. Diabetes
    g. Thromboembolism
    h. Myocardial infarction
    i. Colorectal carcinoma
    j. Breast carcinoma

4. Understand the roles of the public media and of scientific literature in medical/scientific research and education, and be able to utilize appropriately and cite scientific literature.
5. Develop awareness of personal perspective and professional skills including teamwork and reflective practice.

These outcomes will be achieved through study of the common patterns of tissue responses to injury, which are often referred to as pathological processes. To understand these processes, students will draw on knowledge of normal anatomy, histology, biochemistry and physiology.

Learning outcomes 1-3 will be assessed via Online module quizzes, Formative Integration/Feedback sessions, Tutorial Quizzes, as well as an end of course examination. Learning outcome 4 is achieved through the Scientific Writing Literacy Workshop and assessed via the Media Assignment. Learning outcome 5 is achieved through Teamwork activities in the tutorial classes and the Media assignment. Refer to Assessment section for further details.

Graduate Attributes Developed in this Course[3]

Science Graduate Attributes	**Level of FOCUS** *0 = NO FOCUS* *1 = MINIMAL* *2 = MINOR* *3 = MAJOR*	**Activities / Assessment**
Information acquisition, evaluation and synthesis	**3**	• Lectures • Online modules and Feedback/Integration sessions • Tutorial and practical classes • Media assignment • Tutorial quizzes
Research, inquiry and analytical thinking abilities	**3**	• Media Assignment • Online modules and Feedback/Integration sessions • Tutorial quizzes
Communication	**2**	• Media assignment • Tutorials • Tutorial quizzes
Teamwork, collaborative and management skills	**2**	• Team-based learning in tutorials and tutorial quizzes • Media assignment

[3] Contextualised Science Graduate Attributes

Major Topics

The major topics of the course are:

- Acute inflammation
- Chronic inflammation and healing
- Vascular disease
- Neoplasia

Relationship to Other Courses within the Program

PATH2201 is a core Stage 2 course for students enrolled in the Bachelor of Medical Science, and is an elective for students enrolled in other science programs, such as Bachelor of Science or Advanced Science. PATH2201 draws on concepts and knowledge acquired from other Medical Science and Biological Science courses, including: Anatomy, Histology, Physiology, Biochemistry, Molecular Biology and Immunology, in order to explore the pathological processes of aberrations that lead to disease. PATH2201 is also a pre-requisite for Stage 3 Pathology courses.

PATH2202 is a Stage 2 course in the Health and Exercise Science Program. It builds upon core Stage 1 subjects in Anatomy, Biochemistry, and Physiology by presenting lectures, tutorials, museum/case study sessions aimed at increasing understanding of important disease processes. There will be particular emphasis on clinical correlation with disease processes and the application of this knowledge in the discipline of Health and Exercise Science, especially as it relates to management and assessment of patients in rehabilitative therapy.

Rationale and Strategies Underpinning the Course

Teaching Strategies and Rationale for learning and teaching in this course[4]

The course employs a variety of teaching modes in order to facilitate your learning:

1. A collaborative, team-based approach to learning. It is anticipated that students will have an enhanced learning experience through the use of peer teaching and team quizzes. You are also encouraged to utilise your allocated teams as study groups.
2. Lectures, online modules and large group interactive sessions introduce you to pathological processes, as well as specific examples of those processes affecting organs and tissues.
3. Tutorials centred on team-based learning activities, are designed to extend and amplify your understanding of lecture material, in an interactive format. You are encouraged to clarify any difficulties regarding the concepts discussed.
4. **PATH2201** practical classes using specimens from the Museum of Human Disease and an online database of macroscopic images (BEST Network) are designed for you to apply knowledge of disease processes to macroscopic organs and tissues, and to correlate the changes with the clinical manifestations. Practical classes on histopathology employ computer-based virtual microscopy to illustrate the microscopic appearances of the pathological processes described in lectures and macroscopic pathology classes. This allows correlation between disease processes, changes in cells and tissues at the microscopic level, and the manifestations of disease.

[4] Reflecting on your Teaching

PATH2202 Clinicopathological correlation practical classes employ an integrated approach to learning about disease processes with reference to specific case studies, related macroscopic specimens and images (BEST Network) and some relevant microscopic images. Rehabilitation issues that relate to the disease process will also be addressed.

5. A Scientific Writing Literacy Workshop aimed at fostering student graduate attributes in writing communication in science.
6. Learning is supported via Moodle. Announcements, timetables, online modules, lecture slides and audio, science writing literacy skills focus guide and other resources will be made available during the course.
7. The PATH2201/PATH2202 Student Manual contains specific learning objectives for each lecture, tutorial and practical class, together with the course timetable and useful background information.

Differences between PATH2201 and PATH2202

PATH2201 and PATH2202 have common lectures, online modules and weekly tutorials. The key difference between the courses is in the structure of the weekly Practical Sessions.

- **PATH2201** students attend alternating weekly Histopathology Sessions and Macroscopic Pathology Sessions.
- **PATH2202** students attend a weekly Clinicopathological Correlation Session, which includes Museum specimens (and limited histology), but with more emphasis on the clinical setting of the disease and the relevance to Exercise Physiology.

Course Schedule (PATH2201)

Week	Tutorial Tuesday 4-5 or 5-6pm (See allocation)	Lecture 1 Thursday 9-10am Rex Vowels	Lecture 2 Thursday 10-11am Rex Vowels	Practical Thursday 11-1pm Wallace Wurth G6/7 or G8 or G16/17
1	25/07/2017 No tutorial	27/07/2017 Lecture: Introduction (**Herbert**)	27/07/2017 Lecture: Concepts and classification of disease (**Velan**)	27/07/2017 Practical 1: Group A: Macroscopic pathology I – Induction and introduction to macroscopic specimens (**Tedla/Herbert**) Group B: Histopathology session I - Introduction to histopathology and virtual microscopy (**Kumar/Burkhardt**)
2	1/08/2017 No tutorial	3/08/2017 No lecture	3/08/2017 Lecture: Responses to injury (**Kumar**)	3/08/2017 Practical 2: Group A: Histopathology session I - Introduction to histopathology and virtual microscopy (**Kumar/Burkhardt**) Group B: Macroscopic pathology I – Induction and introduction to macroscopic specimens (**Tedla/Herbert**)
3	8/08/2017 Tutorial 1: Classification of disease/Response to injury	10/08/2017 No lecture	10/08/2017 Topic overview lecture: Acute inflammation (**Velan**)	10/08/2017 Practical 3 (Acute inflammation): Group A: Macroscopic pathology II (**Tedla/Herbert**) Group B: Histopathology session II (**Kumar/Burkhardt**)
4	15/08/2017 Tutorial 2 (Quiz 1): Acute inflammation I (Appendicitis)	17/08/2017 No lecture	17/08/2017 Lecture: Scientific writing literacy I (**Jones/Polly**)	17/08/2017 Practical 4 (Acute inflammation): Group A: Histopathology session II (**Kumar/Burkhardt**) Group B: Macroscopic pathology II (**Tedla/Herbert**)
5	22/08/2017 Tutorial 3: Acute inflammation II (Pneumonia)	24/08/2017 Integration/Feedback: Acute inflammation (**Velan**)	24/08/2017 Topic overview lecture: Healing and chronic inflammation (**Herbert**)	24/08/2017 No practical
6	29/08/2017 Tutorial 4 (Quiz 2): Healing	31/08/2017 No lecture	31/08/2017 Lecture: Tuberculosis (**Kumar**)	31/08/2017 Practical 5 (Chronic inflammation): Group A: Macroscopic pathology III (**Tedla/Herbert**) Group B: Histopathology session III (**Kumar/Burkhardt**)

Week	Tutorial Tuesday 4-5 or 5-6pm (See allocation)	Lecture 1 Thursday 9-10am Rex Vowels	Lecture 2 Thursday 10-11am Rex Vowels	Practical Thursday 11-1pm Wallace Wurth G6/7 or G8 or G16/17
7	5/09/2017 Tutorial 5: Chronic inflammation I (Peptic ulceration)	7/09/2017 No lecture	7/09/2017 Lecture: Scientific writing literacy II (**Jones/Polly**)	7/09/2017 Practical 6 (Chronic inflammation): Group A: Histopathology session III (**Kumar/Burkhardt**) Group B: Macroscopic pathology III (**Tedla/Herbert**)
8	12/09/2017 Tutorial 6 (Quiz 3): Chronic inflammation II (Tuberculosis)	14/09/2017 Integration/Feedback: Healing and chronic inflammation (**Kumar**)	14/09/2017 Topic overview lecture: Thrombosis, embolism and infarction (**Velan**)	14/09/2017 Practical 7 (Vascular disease): Group A: Macroscopic pathology IV (**Rodrigo/Herbert**) Group B: Histopathology session IV (**Kumar**)
	Media assignment (Part A) due 14th September			
9	19/09/2017 Tutorial 7: Vascular disease I (Deep vein thrombosis)	21/09/2017 No lecture	21/09/2017 Lecture: Atherosclerosis (**Kumar**)	21/09/2017 Practical 8 (Vascular disease): Group A: Histopathology session IV (**Burkhardt**) Group B: Macroscopic pathology IV (**Rodrigo/Herbert**)
	Media assignment (Part B) due 21st September			
	Mid-semester break			
10	3/10/2017 Tutorial 8 (Quiz 4): Vascular disease II (Atherosclerosis and myocardial infarction)	5/10/2017 Integration/Feedback: Vascular disease (**Velan**)	5/10/2017 Topic overview lecture: Neoplasia 1 (**Tedla**)	5/10/2017 Practical 9 (Disorders of growth): Group A: Macroscopic pathology V (**Rodrigo/Herbert**) Group B: Histopathology session V (**Burkhardt**)
11	10/10/2017 Tutorial 9: Disorders of growth I (Colonic masses)	12/10/2017 No lecture	12/10/2017 Lecture: Neoplasia 2 (**Tedla**)	12/10/2017 Practical 10 (Disorders of growth): Group A: Histopathology session V (**Burkhardt**) Group B: Macroscopic pathology V (**Rodrigo/Herbert**)
12	17/10/2017 Tutorial 10 (Quiz 5): Disorders of growth II (Breast lumps)	19/10/2017 Integration/Feedback: Neoplasia (**Tedla**)	19/10/2017 Lecture Revision session: (**Herbert**)	19/10/2017 Practical 11 (Revision): Group A/B: Histopathology session VI (**Burkhardt**) Group A/B: Macroscopic pathology VI (**Rodrigo/Herbert**)
13	24/10/2017 Tutorial 11: Revision	26/10/2017 No lecture	26/10/2017 No lecture	26/10/2017 No practical

NOTE: Lectures may be subject to change; Changes to the timetable will be announced on Moodle

Course Schedule (PATH2202)

Week	Tutorial Tuesday 4-5 or 5-6pm (See allocation)	Lecture 1 Thursday 9-10am Rex Vowels	Lecture 2 Thursday 10-11am Rex Vowels	Practical Thursday 1-3pm Wallace Wurth G6/7
1	25/07/2017 No tutorial	27/07/2017 Lecture: Introduction (**Herbert**)	27/07/2017 Lecture: Concepts and classification of disease (**Velan**)	27/07/2017
2	1/08/2017 No tutorial	3/08/2017 No lecture	3/08/2017 Lecture: Responses to injury (**Kumar**)	3/08/2017 Clinicopathological correlation 1: Introduction (**Rodrigo**)
3	8/08/2017 Tutorial 1: Classification of disease/Response to injury	10/08/2017 No lecture	10/08/2017 Topic overview lecture: Acute inflammation (**Velan**)	10/08/2017 Clinicopathological correlation 2: Acute appendicitis (**Rodrigo**)
4	15/08/2017 Tutorial 2 (Quiz 1): Acute inflammation I (Appendicitis)	17/08/2017 No lecture	17/08/2017 Lecture: Scientific writing literacy I (**Jones/Polly**)	17/08/2017 Clinicopathological correlation 3: Acute bronchopneumonia (**Rodrigo**)
5	22/08/2017 Tutorial 3: Acute inflammation II (Pneumonia)	24/08/2017 Integration/Feedback: Acute inflammation (**Velan**)	24/08/2017 Topic overview lecture: Healing and chronic inflammation (**Herbert**)	24/08/2017 Clinicopathological correlation 4: Osteomyelitis; Fractured tibia (**Rodrigo**)
6	29/08/2017 Tutorial 4 (Quiz 2): Healing	31/08/2017 No lecture	31/08/2017 Lecture: Tuberculosis (**Kumar**)	31/08/2017 Clinicopathological correlation 5: Peptic ulcer disease (**Rodrigo**)

Week	Tutorial Tuesday 4-5 or 5-6pm (See allocation)	Lecture 1 Thursday 9-10am Rex Vowels	Lecture 2 Thursday 10-11am Rex Vowels	Practical Thursday 1-3pm Wallace Wurth G6/7
7	5/09/2017 Tutorial 5: Chronic inflammation I (Peptic ulceration)	7/09/2017 No lecture	7/09/2017 Lecture: Scientific writing literacy II (**Jones/Polly**)	7/09/2017 Clinicopathological correlation 6: Tuberculosis (**Rodrigo**)
8	12/09/2017 Tutorial 6 (Quiz 3): Chronic inflammation II (Tuberculosis)	14/09/2017 Integration/Feedback: Healing and chronic inflammation (**Kumar**)	14/09/2017 Topic overview lecture: Thrombosis, embolism and infarction (**Velan**)	14/09/2017 Clinicopathological correlation 7: Deep vein thrombosis (**Rodrigo**)
	Media assignment (Part A) due 14th September			
9	19/09/2017 Tutorial 7: Vascular disease I (Deep vein thrombosis)	21/09/2017 No lecture	21/09/2017 Lecture: Atherosclerosis (**Kumar**)	21/09/2017 Clinicopathological correlation 8: Ischemic heart disease; Diabetes (**Rodrigo**)
	Media assignment (Part B) due 21st September			
	Mid-semester break			
10	3/10/2017 Tutorial 8 (Quiz 4): Vascular disease II (Atherosclerosis and myocardial infarction)	5/10/2017 Integration/Feedback: Vascular disease (**Velan**)	5/10/2017 Lecture: Neoplasia 1 (**Tedla**)	5/10/2017 Clinicopathological correlation 9: Colorectal carcinoma (**Rodrigo**)
11	10/10/2017 Tutorial 9: Disorders of growth I (Colonic masses)	12/10/2017 No lecture	12/10/2017 Lecture: Neoplasia 2 (**Tedla**)	12/10/2017 Clinicopathological correlation 10: Breast carcinoma (**Rodrigo**)
12	17/10/2017 Tutorial 10 (Quiz 5): Disorders of growth II (Breast lumps)	19/10/2017 Integration/Feedback: Neoplasia (**Tedla**)	19/10/2017 Lecture: Revision session (**Herbert**)	19/10/2017 Clinicopathological correlation 11: Revision (**Rodrigo**)
13	24/10/2017 Tutorial 11: Revision	26/10/2017 No lecture	26/10/2017 No lecture	26/10/2017 No practical

NOTE: Lectures may be subject to change; Changes to the timetable will be announced on Moodle.

Blended learning

Content in PATH2201 and PATH2202 is delivered using a combination of face-to-face and online activities. A consistent blended approach will be applied to each of the 4 major topics (acute inflammation, chronic inflammation and healing, vascular disease and neoplasia) addressed during the course. Each topic will commence with an overview lecture to provide key information and learning objectives. Specific examples relating to each topic will be provided via a series of interactive online modules which include animations and highlights as well as review quizzes with feedback. Practical and tutorial classes will be used to provide examples and to reinforce concepts. Each topic will conclude with an interactive, large group session focussed on integration of the topic content (Integration/Feedback session).

Online Modules

Online modules relating to each topic will be made available as outlined below. Specific learning objectives for each online module will be provided in the course manual and on Moodle. Students are expected to complete the online modules BEFORE the relevant Integration/Feedback session.

Topic	Online Modules	Available
Acute inflammation	• Examples of acute inflammation (Appendicitis) • Examples of acute inflammation (Pneumonia)	7th August
Healing, the immune response and chronic inflammation	• Healing • Introduction to immune responses • Hypersensitivity and immunodeficiency • Examples of chronic inflammation (Peptic ulcer disease)	21st August
Vascular disease	• Venous thrombosis and Pulmonary embolism • Examples of infarction (Myocardial infarction) • Examples of infarction (Cerebral infarction) • Diabetes	11th September
Neoplasia	• Disturbances of growth • Examples of neoplasia (Colorectal carcinoma) • Examples of neoplasia (Breast carcinoma)	2nd October

Integration/Feedback sessions

These large group sessions use the Echo360 Active Learning Platform (ALP) to present in-class questions, including questions related to relevant case studies. Students respond anonymously to these questions using their laptops, tablets or mobile phones. Immediate feedback is provided by the lecturer, which is tailored to the overall class pattern of student responses.

Assessment Tasks and Feedback

Assessment task	Weight	Format	Due date
Online modules and Integration/Feedback sessions	15%	Online quizzes In-class assessment	Various See timetable
Tutorial quizzes	15%	5 online (Moodle) quizzes	Various
Media Assignment	15%	Part A: Group project Part B: Individual written task	Sep 14 Sep 21
End of course exam	55%	2-hour exam	TBC

Online modules and Integration/Feedback sessions

Students will complete short online quizzes at end of each online module. Quizzes can be attempted multiple times and the highest score achieved **before the Feedback/Integration session for the current topic** will be recorded. Students will also answer questions during the in-class Integration/Feedback sessions via the Echo360 Active Learning Platform (ALP). For each of the 4 sessions, students who submit responses to at least two thirds of the questions will receive 1.875% of the course mark.
For this assessment, 50% of the marks will come from quizzes in online modules; 50% will come from Integration/Feedback sessions.

Knowledge & abilities assessed:

- Knowledge of the causes, pathogenic mechanisms, macroscopic and microscopic appearances and clinical consequences of common diseases affecting humans.
- Knowledge of causes, mechanisms and consequences of pathological processes, including: acute inflammation, chronic inflammation, vascular diseases and neoplasia.
- Apply knowledge of the aforementioned pathological processes to common examples of specific human diseases, including: acute appendicitis, pneumonia, tuberculosis, peptic ulcer disease, atherosclerosis, thromboembolism, myocardial infarction, colorectal carcinoma and breast carcinoma.

Feedback:
For the online modules, feedback will be provided online at the completion of each quiz. For the in-class sessions, feedback will be provided by the lecturer based on student responses submitted using the Echo360 Active Learning Platform (ALP)

Tutorial quizzes

During the semester, students will complete 5 online quizzes during the tutorial classes. Students will attempt quizzes as individuals and then again as part of a team. Students are required to complete the pre-reading and tutorial objectives prior to the tutorial. Therefore, the quizzes in the tutorial will form the basis of the tutorial itself.

Knowledge & abilities assessed:

- Same as for the online modules and Feedback/Integration sessions.
- Development of the Teamwork graduate capability.

Feedback:
Feedback will be provided online at the completion of the team attempt. Additional feedback will be provided by the tutor at the completion of the quiz. For each quiz, 50% of the final mark will be from the individual attempt and 50% will be from the team attempt.

Media assignment

The media assignment assesses awareness of the roles of public media and scientific literature in medical/scientific research and education, and the ability to utilise and cite scientific literature at an academic standard. Teamwork and reflective practice will also be assessed.
The assignment will be completed in two parts.

Part A: In research teams, students will find a recent article presented in the media which addresses at least one of the following issues:

1) a disease outbreak/epidemic,
2) the link between disease and predisposing factors
3) a new or controversial screening test/diagnostic tool or treatment for a disease.

Students will clearly identify a relevant issue and outline a related research question. Students will research the relevant issue and create a brochure which presents basic information about the disease (aetiology, pathogenesis, diagnosis and treatment), and highlights the research question.

Part B: Each student will identify a specific and focussed research question related that outlined in Part A. Students will locate a relevant peer-reviewed (primary) research article, write an annotated bibliography and then evaluate the nature of information presented in both the media release and the journal article.
For this assessment, 50% of the final mark will be from Part A and 50% will be from Part B. Additional information, including assessment criteria and standards will be provided in the course manual and on Moodle.

Knowledge & abilities assessed:
Awareness of the roles of public media and scientific literature in medical/scientific research and education, and the ability to utilise and cite scientific literature at an academic standard. Reflective practice will also be assessed.

Feedback:
For Part A, students will receive feedback from their peers and from a tutor. For Part B, students will receive feedback from an academic.

End of course exam (55%)

Students will complete a 2-hour written exam. Part A will consist of 20 multiple choice questions, Part B will consist of 4 short-answer questions.

Knowledge & abilities assessed:

- Same as for the online modules and Feedback/Integration sessions.

Additional Resources and Support

Text book

You are expected to acquire the following text: Basic Pathology, 10th Ed. V. Kumar, A.K. Abbas & J.C. Aster (2017). Elsevier Saunders.
This text is also available as an e-book through the University Library:
Robbins Basic Pathology: Online
(Note – this link is to the 9th edition. Electronic access to the 10th edition should be available soon)

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. 9th Ed. V. Kumar, A.K. Abbas & J.C. Aster. (2015). Elsevier Saunders.

Course manual

The PATH2201/PATH2202 Student Manual will be provided online, which outlines the learning objectives for each tutorial topic and practical class. The Pathology Manual contains a large amount of valuable information that will facilitate your study.

Required Reading

All required readings are sourced from Robbins Basic Pathology, 10th Ed. A list of required readings for each week and for the tutorial quizzes will be made available via Moodle.

Moodle

All relevant information relating to the course will be made available on Moodle, including PDFs for each of the tutorial practical classes. Check the Moodle page regularly for announcements and updates to the course content. In particular, you should become familiar with the Glossary of Terms in Pathology which is available via a link on the Moodle page.

Recommended Internet sites

“Images of Disease” (IOD) is a database of images used for teaching within the Department. The latest version of Images of Disease is now available online, optimised for smart phones and tablet computers, as well as Firefox, Chrome and Safari browsers on laptop or desktop computers – http://iod.med.unsw.edu.au (zID and zPass required). An interactive Images of Disease (IOD) app for iPhone and iPad is available to download from: https://itunes.apple.com/au/app/images-of-disease/id756150891?ls=1&mt=8. A version of the IOD app is also available for Android phones and tablets from: https://play.google.com/store/apps/details?id=com.unsw.med.iod
In all cases, you need to install the app on your device via the relevant link above. You can then unlock the full version of the app by tapping on the login button at the bottom of the screen, then entering your zID and zPass.

There are many resources available on the web, which vary from simple patient information brochures to online 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
Medline Plus (‘health topics’ index of diseases with information)
http://www.nlm.nih.gov/medlineplus/healthtopics.html

Computer Laboratories or Study Spaces

Students wishing to revise macroscopic specimens (pots) can access the Museum of Human Disease, 9 am – 5 pm, Mon – Fri. Note that all students must be inducted into the Museum before access is granted. Museum induction will occur during the first Practical class.

Student wishing to review Histopathology and Macroscopic images via the BEST Network can use computers located in G06/G07 or G16/, Wallace Wurth West Building.

Required Equipment, Training and Enabling Skills

Equipment Required

There is no specific equipment required for PATH2201/PATH2202.

Enabling Skills Training Required to Complete this Course

In order for students to attend Practical lessons or personal revision in the Museum of Human Diseases, students must first attend an induction. Museum induction will occur during the first Practical class. Any student who does not attend this induction will not be permitted to participate in the Practical classes or access the Museum, and will need to contact Museum staff to schedule an induction.

Course Evaluation and Development

Student feedback is gathered periodically by various means. Such feedback is considered carefully with a view to acting on it constructively wherever possible. This course outline conveys how feedback has helped to shape and develop this course.

Mechanisms of Review	Last Review Date	Comments or Changes Resulting from Reviews
Course Review	April 2017	The ongoing ePortfolio assessment will be removed from the course. Student reflection will now be incorporated into the media assignment which is consistent with courses taught in the Medicine Program. The Formative online assessment will be removed. The quizzes in the online modules and Feedback/Integration sessions will now enable students to assess their progress throughout the semester. The Media assignment has been modified. The task will now involve a group project (Part A) and an individual writing assignment (Part B). The due dates for these parts will be staggered to reduce the demand on students and to enable more timely delivery of student feedback. The revised assignment will also incorporate Teamwork and Reflective practice and include peer assessment. Online modules developed in 2016 will be further enhanced. In response to student feedback asking for additional questions, each module will now contain a quiz, and audio will be added to the online module on peptic ulcer disease. As part of the Inspired Learning Initiative, the practical classes in both PATH2201 and PATH2202 will be enhance with new adaptive tutorials (Smart Sparrow) to further incorporate blended learning into the course.
Major Course	April 2016	OU Blog will replace WordPress as the platform for creating student

Review		ePortfolios. PATH2201/PATH2202 will continue to pilot the Echo360 Active Lecture Platform software. Content will be delivered using a novel Blended Learning approach. Of the 4 lectures in a typical fortnightly cycle for a given topic, one conventional content-based face-to-face lecture will be retained. One lecture timeslot will be used for an interactive large-group session focusing on integration of the content for the fortnight, with one or more illustrative case studies and several in-class questions to which students will respond via the ALP. The remaining material will be converted to online activities (part content delivery and part interactive) using iSpring Pro. Modules will include Power Point slides and recorded audio lectures with formative quizzes. 5% of the course mark has been allocated to participation in the integration/feedback sessions and completion of the online modules. The weighting of the media assignment has been reduced from 20% to 15%.
Course Review	April 2015	WordPress will replace Mahara as the platform for creating student ePortfolios. An online assessment rubric in Moodle will be used to mark the Media assignments. This system will enable tutors to provide more detailed and specific feedback to students. PATH2201/PATH2202 will participate in a first-round pilot of the Echo360 Active Learning Platform (ALP). This software will allow students to participate in quizzes and other activities during lectures using mobile devices. Students will be able to comment or ask questions on lecture slides prior to or during classes.
Course Review	April 2014	The order of lectures was adjusted to improve the presentation of concepts. The lecture “Healing” was placed before “Chronic Inflammation”. An additional lecture “Introduction to Immune Responses” was added to enhance students understanding of basic immunology, which is essential to Pathology. Online tutorial quizzes were introduced using Moodle to facilitate the delivery of immediate and consistent feedback following each quiz.

Administration Matters

Important information to supplement this outline can be found at the following link:
http://medicalsciences.med.unsw.edu.au/students/undergraduate/advice-students

Expectations of Students

Students are required to attend 80% of the Tutorials in order to sit the end of course exam. A courtesy email will be sent to alert students who are absent for 2 tutorials. Students missing more than 2 tutorials will be required to contact the course convenor (Dr Herbert) to discuss their eligibility to sit the exam.

Assignment Submissions

Parts A and B of the Media Assignment are to be submitted electronically as a Word file or PDF file via Moodle, and these will be subjected to a check for plagiarism using Turnitin software. Submissions must be made by Midnight on the due date.
Submitted assignments must include a cover sheet, clearly stating:

- The assignment
- Your name,

- Your student number,
- Your tutor's name.

Any late submissions will attract a penalty of 10% of the total mark per day or part thereof (including weekends). Keeping to a deadline is part of the assessment. In exceptional circumstances, (where a student has missed at least 3.5 weeks of university during the period of the assignment AND have documents to this effect AND have notified the course convenor in writing at least 2 weeks before the deadline), some concession may be offered and is provided on a case-by-case basis.

Workplace Health and Safety

Refer to The Museum of Human Disease below.

Pathology practical classes involve using laptops/desktop computers and the manual handling of specimen pots from the Museum of Human Disease. Students are required to read a Safe Work Procedure prior to participating in the Pathology practical classes within the Wallace Wurth building. The SWP can be viewed on Safesys (https://Safesys.unsw.edu.au; Document ID: MED-SOMS-SWP-6092) For more information on matters related to workplace health and safety policies at UNSW, visit the following web site: https://safety.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 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 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 Williamson and the education officers in the Museum 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.
- Specimens are preserved in Perspex and contain a range of preserving chemicals that may be harmful. Chemicals used include **formalin, pyridine, sodium dithionate**. A full list of chemicals and associated MSDS information is available in the H&S Station and on the SoMS website.

Chemical	**Maximum Percentage Composition**
Glycerol	17 (v/v)
Pyridine	0.8 (v/v)
Sodium Acetate	7 (w/v)
Formalin	<2 (v/v)
Sodium Dithionate	0.4 (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 Museum staff 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 Museum staff 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.

Disability Support Services

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 convenor prior to, or at the commencement of, their course, or with Disability Support Services (02 9385 4734 or https://student.unsw.edu.au/disability).

Student Complaint Procedure

School Contact:
A/Prof Nick Di Girolamo
SOMS Grievance Officer
(02) 9385 2538
N.Digirolamo@unsw.edu.au

Prof Peter Gunning
Head of School
(02) 9385 2531
P.Gunning@unsw.edu.au

University Contact:
Student Conduct and Appeals Officer (SCAO) within the Office of the Pro-Vice-Chancellor (Students) and Registrar.
(02) 9385 8515
Studentcomplaints@unsw.edu.au

University Counselling and Psychological Services
(02) 9385 5418

UNSW Academic Honesty and Plagiarism

The Department of Pathology will not tolerate plagiarism in submitted written work. The University regards this as academic misconduct 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.

https://student.unsw.edu.au/plagiarism

Your attention is drawn to the following extract from the above website:

"At UNSW **plagiarism** is using the words or ideas of others and passing them off as your own. Examples of plagiarism, including self-plagiarism, are:

Copying – Using the same or very similar words to the original text or idea without acknowledging the source or using quotation marks. This includes copying materials, ideas or concepts from a book, article, report or other written document, presentation, composition, artwork, design, drawing, circuitry, computer program or software, website, internet, other electronic resource, or another person's assignment, without appropriate acknowledgement.

Inappropriate paraphrasing – Changing a few words and phrases while mostly retaining the original structure and/or progression of ideas of the original, and information without acknowledgement.
This also applies in presentations where someone paraphrases another's ideas or words without credit and to piecing together quotes and paraphrases into a new whole, without appropriate referencing.

Collusion – Presenting work as independent work when it has been produced in whole or part in collusion with other people. Collusion includes

- students providing their work to another student before the due date, or for the purpose of them plagiarising at any time
- paying another person to perform an academic task and passing it off as your own
- stealing or acquiring another person's academic work and copying it

- offering to complete another person's work or seeking payment for completing academic work.
- This should not be confused with academic collaboration.

Inappropriate citation – Citing sources which have not been read, without acknowledging the 'secondary' source from which knowledge of them has been obtained.

Self-plagiarism – 'Self-plagiarism' occurs where an author republishes their own previously written work and presents it as new findings without referencing the earlier work, either in its entirety or partially.
Self-plagiarism is also referred to as 'recycling', 'duplication', or 'multiple submissions of research findings' without disclosure. In the student context, self-plagiarism includes re-using parts of, or all of, a body of work that has already been submitted for assessment without proper citation."

The Learning Centre has developed online modules titled 'Working with Academic Integrity'. It is recommended that all students complete these modules (approximately 1 hour in total):

The 'Working with Academic Integrity' module is open to all UNSW students. The link is http://moodle.telt.unsw.edu.au/course/view.php?id=17924 and the student key is **Student583**.

The Learning Centre's website is the main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:
http://www.lc.unsw.edu.au/academic-integrity-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.