



Faculty of Medicine
School of Medical Sciences

PATH 3206

Cancer Pathology

2014

Course convenor: Dr Christine van Vliet

SEMESTER I

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PATH3206 Cancer Pathology

2014

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PATH3206 Cancer Pathology Integrated Timetable 2014

Week	Date	Time	Location	Lecturer	Title
2	10/03/2014	9	LG03	van Vliet	Lecture - Introduction
		10	LG03	van Vliet	Lecture - Neoplasia
		11	See allocated		Tutorial – Neoplasia I
	11/03/2014	3-5	WWG06/G07	van Vliet	Practical – Neoplasia
3	17/03/2014	9	LG03	van Vliet	Lecture – Regulation of cell cycle I
		10	LG03	van Vliet	Lecture – Regulation of cell cycle II
		11	See allocated		Tutorial – Neoplasia II
	18/03/2014	3-5	WWG06/G07	van Vliet	Practical - Regulation of cell cycle
4	24/03/2014	9	LG03	van Vliet	Lecture – Cancer Pathology I
		10	LG03	van Vliet	Lecture – Cancer Pathology II
		11	See allocated		Tutorial – Regulation of cell cycle
	25/03/2014	3-5	Museum	van Vliet	Practical - Poster Project
5	31/03/2014	9	LG03	Hawkins	Lecture - Colorectal Carcinogenesis I
		10	LG03	Hawkins	Lecture – Colorectal Carcinogenesis II
		11	See allocated		Tutorial – Cancer Pathology
	1/04/2014	3-5	WW G06/G07	Hawkins	Practical - Colorectal carcinogenesis
6	7/04/2014	9	LG03	van Vliet	Lecture – Viral Carcinogenesis
		10	LG03	van Vliet	Lecture – Cervical Carcinoma
		11	See allocated		Tutorial – Colorectal Carcinogenesis
	8/04/2014	3-5	WW G06/G07	van Vliet	Practical – Cervical Carcinoma
7	14/04/2014	9	LG03	Velan	Lecture – Skin neoplasms
		10	LG03	van Vliet	Lecture – Cancer Pathology III
		11	See allocated		Tutorial – Cervical carcinogenesis
	15/04/2014	3-5	WW G06/G07	Velan	Practical - Skin neoplasms
MID SESSION BREAK					
8	28/04/2014	9	LG03	van Vliet	Lecture – Thyroid and pancreas
		10	LG03	van Vliet	Lecture – Breast carcinoma
		11	See allocated		Tutorial – Skin neoplasms
	29/04/2014	3-5	WW G06/G07	van Vliet	Practical – Breast carcinoma
9	5/05/2014	9	LG03	Stewart	Lecture – Carcinogenesis I
		10	LG03	Stewart	Lecture – Carcinogenesis II
		11	See allocated		Tutorial – Breast carcinoma
	6/05/2014	3-5	WW G06/G07	van Vliet	MID SESSION EXAMINATION
10	12/05/2014	9	LG03	Kumar	Lecture - Pulmonary neoplasms
		10	LG03	van Vliet	Lecture – Upper GI neoplasms
		11	LG03	van Vliet	Tutorial – Thyroid and pancreas
	13/05/2014	3-5	WW G06/G07	Kumar	Practical - Pulmonary neoplasms

11	19/05/2014	9	LG03	Dziegielewski	Lecture – Prostate carcinoma
		10	LG03	Lindeman	Lecture – Lymphoma and leukaemia
		11	See allocated		Tutorial – Upper GI neoplasms
	20/05/2014	3-5	WW G06/G07	van Vliet	Practical – Prostate carcinoma
12	26/05/2014	9	LG03	van Vliet	Poster presentations
		10	LG03	van Vliet	Poster presentations
		11	LG03	van Vliet	Poster presentations
	27/05/2014	3-5	WW G06/G07	van Vliet	Poster presentations
13	2/06/2014	9	LG03	Velan	Lecture – Intracranial neoplasms
		10	LG03	van Vliet	Lecture – Feedback session
		11	See allocated		Tutorial – Prostate carcinoma
	3/06/2014	3-5	WW G06/G07	van Vliet	PRACTICAL EXAMINATION

Pathology Teaching Laboratory

Student Risk Assessment

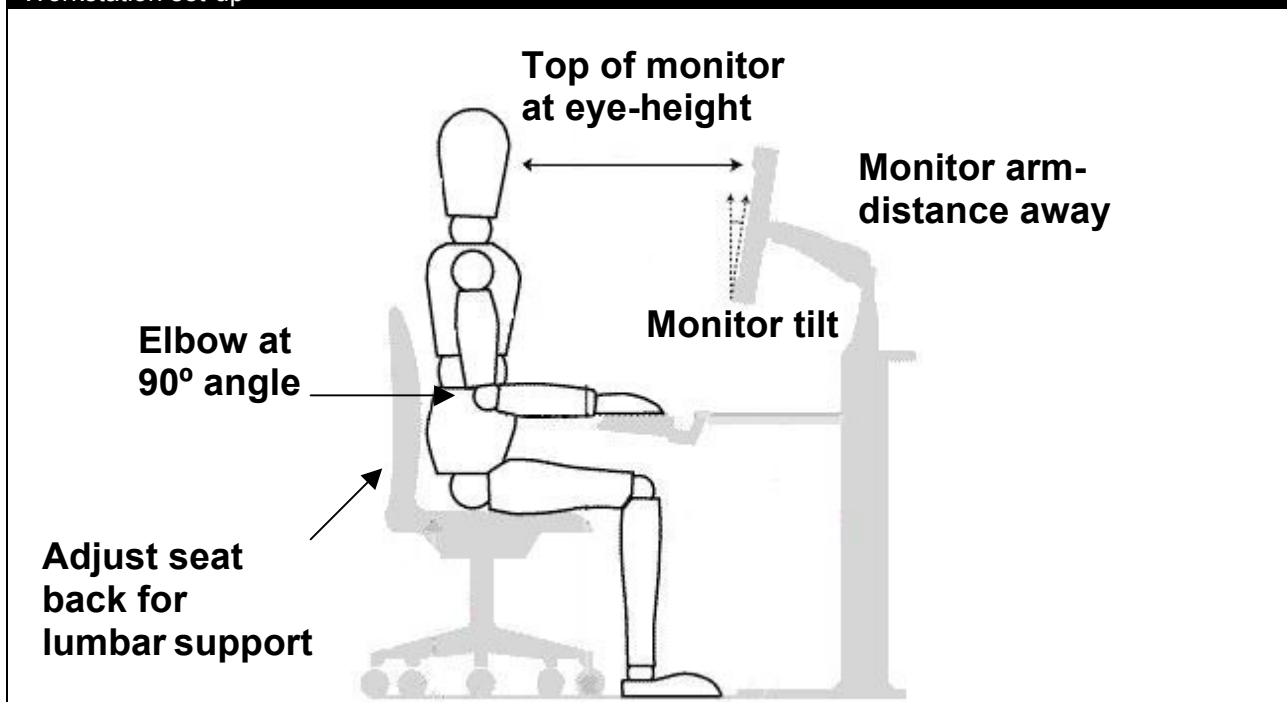


UNSW
THE UNIVERSITY OF NEW SOUTH WALES

Pathology practicals in
Wallace Wurth

Hazards	Risks	Controls
Ergonomics	Musculoskeletal pain.	Correct workstation set-up.
Electrical	Electrical shock/fire	Check electrical equipment in good condition before use. All portable electrical equipment tested and tagged.
Handling pots	Chemical spillage	Instructions on correct manual handling of pots

Workstation set-up



Manual handling of pots

- All pots contain real human tissue that has been generously donated to medical science and **must be treated with appropriate respect and dignity.**
- 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.

MANUAL HANDLING OF POTS

1. It is recommended that all students wash their hands thoroughly as they leave practical class. Chemical residues may be present on pots.
2. **Carry one pot at a time.** Use two hands at ALL TIMES and support the base of pot.
3. **Avoid rough handling and/or tilting of pots.** This can cause leaking joints or tear tissue in specimen.
4. Limit the number of pots on a table at any one time.

SPILLS AND LEAKAGES

If a specimen is leaking or broken, do not attempt to wipe up the spillage. Clear the area and immediately inform a member of academic staff or the Museum Manager. A spill kit will then be used to absorb the fumes.

Personal Protective Equipment

Not necessary in these practicals.
Enclosed shoes must be worn to all Practicals.

Emergency Procedures

In the event of an alarm, follow the instructions of the demonstrator. The initial sound is advising you to prepare for evacuation and during this time start packing up your things. The second sound gives instruction to leave. The Wallace Wurth assembly point is in the lawn in front of the Chancellery. In the event of an injury inform the demonstrator. First aiders and contact details are on display by the lifts. There is a first aid kit in the laboratory and the Wallace Wurth security office.

Clean up and waste disposal

Spill kit

Declaration

I have read and understand the safety requirements for this practical class and I will observe these requirements.

Signature:.....Date:.....

Student Number:.....

Staff contacts in the Department of Pathology

Name	Title	E-mail
Dr Christine van Vliet	Lecturer and PATH3206 Convenor, Department of Pathology	C.vanVliet@unsw.edu.au Rm 1506 lvl 15 Mathews Bldg Work days: Mon, Tues, Wed
A/Prof Gary Velan	Head Dept of Pathology	G.Velan@unsw.edu.au
Prof Nicholas Hawkins	Professor of Pathology and Head of School of Medical Sciences	N.Hawkins@unsw.edu.au
Prof Denis Wakefield	Professor, Department of Pathology	D.Wakefield@unsw.edu.au
Prof Rakesh Kumar	Professor, Department of Pathology	R.Kumar@unsw.edu.au
Prof Andrew Lloyd AM	Professor, Department of Pathology	A.Lloyd@unsw.edu.au
Prof Carolyn Geczy	Professor, Department of Pathology	C.Geczy@unsw.edu.au
A/Prof Nicodemus Tedla	Assoc Professor, Department of Pathology	N.Tedla@unsw.edu.au
Dr Shane Thomas	Senior Lecturer, Department of Pathology	Shane.Thomas@unsw.edu.au
Dr Patsie Polly	Senior Lecturer, Department of Pathology	Patsie.Polly@unsw.edu.au
Dr Simone Van Es	Lecturer, Department of Pathology	S.VanEs@unsw.edu.au
Dr Mark Dziegielewski	Lecturer, Department of Pathology	M.Dziegielewski@unsw.edu.au
Dr Fabio Luciani	Senior Lecturer, Department of Pathology	Luciani@unsw.edu.au
Mr Thuan Thai	Lecturer, Department of Pathology	Thuan@unsw.edu.au
Dr Cristan Herbert	Lecturer, Department of Pathology	C.Herbert@unsw.edu.au

Technical and support staff

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, 5th Floor Wallace Wurth EAST 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 and Mr Ryan Ling

Position: Student Advisor

Location: Room G27 Biosciences building

Ms Robinson and Mr Ling are responsible for general administration and student support within the School of Medical Sciences.

Mr Derek Williamson

Position: Museum Manager

Location: Room G04 Ground Floor Samuels Building, Building F25

Mr Williamson provides support for all undergraduate teaching programs. Mr Williamson co-ordinates a network of volunteers, who assist with the supervision of visitors from outside the University. Contact Mr Williamson if there are any broken or leaking specimens in the Museum.

Ms Julia Kiss

Position: Museum Education Officer

Location: Room G04 Ground Floor Samuels Building, Building F25

Ms Kiss 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 Fergus Grieve

Position: SOMS Web, TELT and Information System Administrator

Location: Administrative Wing, 5th Floor Wallace Wurth EAST Building

Mr Grieve maintains materials uploaded to *Moodle*. Please contact Mr Grieve if you have any inquiries related to PATH3206 online resources, including lectures, assignments, timetables and communications.

PATH3206 Cancer Pathology

Introduction

Welcome to PATH3206 Cancer Pathology (previously Molecular Basis of Disease B).

PATH3206 aims to promote understanding of recent advances in the pathogenetic mechanisms underlying neoplasia. There is detailed discussion of molecular carcinogenesis, the metastatic process and techniques for diagnosis. Topics covered include neoplasia of the colon, breast, prostate, oesophagus, stomach, skin, lung cervix and lymphoma and leukaemia.

To understand these processes, you will draw on your knowledge of normal anatomy, histology, biochemistry and physiology.

This course is offered during semester 1 and counts for six units of credit. PATH2201/2 (Processes in Disease) is a prerequisite for the course.

The UNSW Handbook contains information for students wishing to undertake a major in Pathology.

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. 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 neoplasia.

The staff of the Department of Pathology join me in wishing you an interesting and enjoyable semester 1.

Dr Christine van Vliet (PATH3206 Convenor)

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 Christine van Vliet (c.vanvliet@unsw.edu.au) by e-mail. Students wishing to see other members of staff should email and **make an appointment**. If students have difficulties of a personal nature, they should contact the School's Grievance Officer, Dr P. Pandey, or Prof Nick 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 via:
<https://my.unsw.edu.au/student/atoz/SpecialConsideration.html>.

It is intended that supplementary exams for the School of Medical Sciences in Semester 1, 2014 will be held on the 15th, 16th and 17th July 2014. Special considerations sought outside the 3 day time period WILL NOT be accepted except in TRULY exceptional circumstances.

To have a result reviewed (checking of mark and/or reassessment):
<https://my.unsw.edu.au/student/academiclife/assessment/Results.html>

To appeal academic standing or ability to progress:
https://my.unsw.edu.au/student/academiclife/assessment/finalisation_results.html

Guidelines on extra-curricular activities affecting attendance:

<http://medalsciences.med.unsw.edu.au/sites/soms.cms.med.unsw.edu.au/files/Extra-curricularActivitiesSOMS.pdf>

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://medalsciences.med.unsw.edu.au/>

Official communication by email

All students in course PATH3206 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). Students must use their official UNSW email address for all correspondence. The University recommends that you check your mail at least every 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.

Resources for students

Recommended text

You are expected to use the following text available online via a link in Path 3206 Moodle or the UNSW library SearchFirst website - <http://library.unsw.edu.au/HowDoI/databases.html> (zID and zPass required). Search for the database MD Consult, then search for Robbins Basic Pathology.

Robbins Basic Pathology. 9th edition. V. Kumar, A.K. Abbas, & J.C. Aster (2012). Saunders & Co. Philadelphia PA; Elsevier Saunders.

Highly recommended for students wishing to study the molecular biology or clinical features of diseases in greater depth:

Robbins and Cotran Pathologic Basis of Disease 8th edition. V. Kumar, A.K. Abbas & N. Fausto (2010) Elsevier Saunders.

PATH 3206 Moodle

Students enrolled in PATH3206 will be able to access the timetable, lecture notes and related information via Moodle: <http://telt.unsw.edu.au>

Images of disease (IOD) database

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 4+, Chrome 13+ and Safari browsers on laptop or desktop computers – <http://iod.med.unsw.edu.au> (zID and zPas required). An interactive Images of Disease app for iPhone and iPad is available to download from that website.

The following information might help you understand more about IOD.

What you get

- Over 3000 images relevant to your study as an undergraduate. Many of these images represent specimens from the Museum of Human Disease, or histopathological images from the student histopathology slide sets. Accompanying x-rays and images of surgical and autopsy specimens are also available.
- A database that links them all together
- A user interface that lets you access the images in a variety of ways
- Interactive "hotspotted" images to assist your understanding of macroscopic Pathology.

What you do not get

- A collection of images that you can send to your friends, put in your magazines, put on the Internet or whatever other scheme seems clever at the time.
Many of the images used in this program are of a sensitive nature, and are intended for the purpose of private study by pathology students and graduates. You should exercise appropriate standards of professional ethics when using them.
- A high level of technical support
 Unfortunately, it will be impossible for us to answer all your problems immediately, as we have very limited resources. We will of course make every effort to help, and will provide you with a listing of known problems and difficulties on request.

The Museum of Human Disease page contains links to some excellent undergraduate and postgraduate educational resources, of which we would encourage you to make full use.

The address is: "<http://web.med.unsw.edu.au/pathology/pathmus/>".

Additional learning resources

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:

Medline Plus ('health topics' index of disease with information)

<http://www.nlm.nih.gov/medlineplus/healthtopics.html>

University of Iowa (on-line histological slides on many of the topics covered)

http://www.path.uiowa.edu/virtualslidebox/nlm_histology/

http://www.path.uiowa.edu/virtualslidebox/iowa_histopathology/index.html

The Cancer Council New South Wales

<http://www.nswcc.org.au/>

The NSW Cancer Institute

<http://www.cancerinstitute.org.au/>

National Cancer Institute

<http://www.cancer.gov/>

Research opportunities

Opportunities exist for all students wishing to undertake undergraduate and postgraduate research programs within the School of Medical Sciences. Information can be accessed via the Faculty of Medicine directory for the School of Medical Sciences at:

<http://medicallsciences.med.unsw.edu.au/somsweb.nsf/page/Research>

Student support services

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 convenor prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit at <https://my.unsw.edu.au/student/atoz/Disability.html>. Issues to be discussed may include access to materials, note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made.

Course evaluation and development

Student evaluative feedback on the course is gathered each year using UNSW's Course and Teaching Evaluation and Improvement (CATEI) Process. Student feedback is taken seriously, and continual improvements are made to the course based in part on such feedback.

Student learning outcomes and graduate attributes

For the cancer topics covered:

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

1. Describe and explain the molecular and cellular pathogenetic mechanisms of carcinogenesis;
2. Describe the macroscopic and microscopic appearances;
3. Correlate the clinical features with the underlying pathogenetic mechanisms;
4. Describe the epidemiology, aetiology, diagnosis, staging, treatment and prognosis of cancers;
5. Discuss recent advances in knowledge pertaining to the molecular pathogenesis;
6. Develop written and oral skills in scientific communication.
7. Develop skills in collaborative teamwork

You are encouraged to develop the following Graduate Attributes by undertaking the learning activities in this course. These attributes will be assessed within the prescribed assessment tasks (see Assessment):

1. An in-depth engagement with the relevant disciplinary knowledge in its interdisciplinary context.
2. The capacity for analytical and critical thinking and for creative problem-solving.
3. The ability to engage in independent and reflective learning.
4. The skills required for collaborative and multidisciplinary work

Learning and Teaching approach.

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 team quizzes, peer teaching and team projects. You are also encouraged to utilise your allocated teams as study groups.
- 2) A series of **lectures** introduce you to pathological processes, as well as specific examples of those processes affecting organs and tissues;
- 3) **Tutorials** are intended to extend and amplify your understanding of material presented in lectures in an interactive format, where you are encouraged to clarify any difficulties regarding the concepts discussed. Students will be allocated into teams and will complete individual and team quizzes and work collaboratively on interpretation of clinical problems and/or investigation results. Pre-reading will be assigned for each tutorial;
- 4) **Practical classes** employ computer-based virtual microscopy, in order to permit correlation between disease processes, changes in cells and tissues at the microscopic level and the manifestations of disease.
Practical classes will reinforce the clinico-pathological correlations associated with each topic. They are intended to help you to acquire the ability to recognize the macroscopic and microscopic features of pathology specimens and to relate the pathology to clinical application. Macroscopic “pots” will be generally used in conjunction with projected microscopic slides, x-rays and other materials;
- 5) Learning is supported via **Moodle**. Announcements, timetables, lecture slides and other resources will be made available during the course.

Assessment

Students will undertake multiple forms of assessment during semester:

- Team and Individual Quizzes (TIQ) 15%
- Mid-session examination 15%
- Team and Individual Project (TIP) 15%
 - *Team member peer evaluation 2%*
 - *Teamwork 7%*
 - *Individual oral defence 6%*
- Practical examination 10%
- Final examination (short answers) 45%

Team and Individual Project (TIP): Team poster and individual oral defence

Each team will be given a specimen or set of specimens and/or gene and/or carcinogenesis pathway.

Team poster

The students are to **create a poster which explains** the pathobiological mechanisms. Students should read their Robbins textbook and journal review articles.

Individual oral defence

Each group will present an **oral defence** of their poster. The spokesperson for the group (nominated by the students themselves) should deliver an overview of the poster in the first 2-3 minutes. In the remaining time **all members** of each group must 'defend' their poster to a Department of Pathology staff member.

The aim of the group project is to provide an in-depth understanding of the pathobiological mechanisms of individual neoplasms. The project will encourage students to think critically and engage in problem solving in order to determine the interrelatedness of pathological specimens. The presentation and oral defence will enhance students' skills in effective communication and teamwork.

SEMESTER I

- Week 4: Students allocated into teams. The specimen(s)/genes/pathway for the team project will be allocated to each team during the practical class. Instructions will be given.
- Week 11: **Team poster due electronically no later than 5pm Monday 19/5/2014.** Posters must be submitted electronically as a PowerPoint slide, using the poster submission icon on the PATH3206 Moodle website. In addition the text of the posters must be submitted as a separate, fully referenced Word document, using the Turnitin icon on the PATH3206 Moodle website, no later than 5pm Monday 19/5/2014, (see Submission of Team project).
- Week 12: Team poster presentation and individual oral defence

Assessment criteria

Team member peer evaluation

Each student in the Team will complete an online evaluation form for each member of their Team. The student's peer evaluation will be marked out of 2 and will contribute 2% of the final course mark. The mark will be an average of all the Team members' assessments of the student. The Team member peer evaluation form is available for completion on the PATH3206 Moodle website.

Team member peer evaluation form

Student's (being assessed) name and student ID:

Team number:

Assessor's name and student ID:

Place a cross in the appropriate mark box for each of the five criteria listed. Total the score at the bottom of the table. Please justify your marks in the comments section.

	0	0.25	0.5
1. Execution of allocated tasks effectively and on time			
2. Attendance to meetings called on by Team members			
3. Contribution to Team discussion			
4. Scientific quality of contribution			

TOTAL: /2

Comments:

Please note: If a student does not contribute to the team project they may receive a zero grade for the project.

Team poster and individual oral defence evaluation

Teams will be marked on their presentations by a staff member from the Department of Pathology. Criteria for marking will be discussed in Week 4. The team poster will be marked out of 7 and will contribute 7% of the final mark for the course.

The individual oral defence will be marked out of 6 and will contribute 6% of the final mark for the course.

Submission of Team project

Posters must be submitted electronically as a PowerPoint slide, using the poster submission icon on the PATH3206 Moodle website and email to c.vanvliet@unsw.edu.au **no later than 5pm Monday 19/5/2014**.

In addition the text of the posters must be submitted as a separate fully referenced Word document, using the Turnitin icon on the PATH3206 Moodle website and email to c.vanvliet@unsw.edu.au **no later than 5pm Monday 19/5/2014**. Figures, diagrams and tables used in the poster must also be referenced in the Word document. All posters will be assessed for plagiarism by use of Turnitin software. Please use the American Psychological Association (APA) referencing style (see http://info.library.unsw.edu.au/biomed/skills/direct/Info_Skills_Docs/apa/apa1.htm).

IMPORTANT: The PowerPoint slide and word document must have PATH3206 and the Team number in the file name, e.g. PATH3206_Team1.ppt and PATH3206_Team1.doc

Late Team projects

Students will be penalised 5% of the mark for each day the poster is late. **Posters submitted later than 5pm Friday 23/5/2014 will receive a zero grade.**

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/conduct>

Your attention 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.

These principles apply to both text and footnotes of sources. They also apply to sources such as teaching materials, and to any work by any student (including the student submitting the work) which has been or will be otherwise submitted for assessment. You must obtain the prior approval of your lecturer if you wish to submit to that lecturer an essay substantially similar to one which has already been, or will be, submitted to another lecturer.

Team and individual quizzes (TIQ)

There will be quizzes held in the tutorial sessions consisting of MCQs. Some tutorial quizzes will be undertaken by the individual student and then by the team, others just individually. Pre-reading for the quizzes is specified in the tutorial outlines of the manual. Students need to provide a reason to Dr van Vliet for a missed tutorial via email. If the reason is approved then the student will receive 50% for their individual quiz mark and the team mark. If the reason is not approved the student will receive zero for both the individual and team quiz however the team will not be penalised.

Mid-session examination

A **mid-session exam in Week 9** (15% of the final mark) will be conducted. The examination will include material covered in Weeks 1-8 of PATH3206. The skills achieved by mastering the tutorial quizzes will be assessed in this exam.

Practical examination

A **practical examination in Week 13** (10% of the final mark) will be conducted. This will consist of a series of stations each with questions based on material presented during the practical sessions and lectures.

Final written examination

A **2-hour end of course examination** (45% of the final mark). The questions assess all the learning outcomes. This exam encourages an in-depth engagement with pathology within a clinical context. The questions vary in style; some questions may have two parts.

Missed exams

If in any circumstances you unavoidably miss an examination, you must inform the Registrar and also contact the relevant Course Office immediately. Normally, if you miss an exam (without medical reason) you will be given an absent fail. If you arrive late for an exam no time extension will be granted. It is your responsibility to check timetable and ensure that you arrive with sufficient time.

Supplementary examination

A supplementary examination may be awarded at the discretion of the Department of Pathology to students who have provided evidence for special consideration according to the UNSW guidelines. The deferred exam may include a significant oral element. Students who believe that they are eligible for further assessment must contact Dr van Vliet to seek further information. It is intended that supplementary exams for the School of Medical Sciences in Semester 1, 2014 will be held on the 15th, 16th and 17th July, 2014.

Medical certificates

If you miss any examination for medical reasons you must lodge a medical certificate with New South Q within **3 DAYS** (refer to UNSW Student Gateway@ www.student.unsw.edu.au for further details). **Special considerations sought outside the 3 day time period WILL NOT be accepted except in TRULY exceptional circumstances.**

Attendance requirements

Attendance at tutorials and practical sessions is compulsory. An 80% attendance is required for you to be eligible to sit the final examination. Students need to provide a reason to Dr van Vliet for a missed tutorial via email. If the reason is approved then the student will receive the average of their team's individual quiz mark and the team mark. If the reason is not approved the student will receive zero for both the individual and team quiz however the team will not be penalised.

Sample examination paper

THE UNIVERSITY OF NEW SOUTH WALES EXAMINATION

PATH 3206 CANCER PATHOLOGY

TIME ALLOWED – **2 HOURS**

TOTAL NUMBER OF QUESTIONS - **4**

ANSWER ALL QUESTIONS. ALL QUESTIONS ARE OF EQUAL VALUE

THIS PAPER MAY NOT BE RETAINED BY THE CANDIDATE.

NO HANDWRITTEN OR TYPED NOTES OR TEXTS MAY BE BROUGHT INTO THE EXAMINATION ROOM.

ANSWER EACH QUESTION IN A SEPARATE BOOK. ALL ANSWERS MUST BE WRITTEN IN INK. PENCILS MAY ONLY BE USED FOR DRAWING.

Question 1

- (a) Write notes on factors which can help determine the prognosis of a woman with carcinoma of the breast
- (b) Compare and contrast the predisposing factors, clinical features and biological behaviours of melanoma and basal cell carcinoma of the skin

Question 2

- (a) Discuss the clinical consequences of colorectal neoplasia, including the effects of benign colorectal neoplasms.
- (b) Discuss genetic changes that characterise development and progression of colorectal neoplasms. Highlight the ways in which understanding of hereditary bowel cancer syndromes has helped to explain the different genetic pathways involved in sporadic colorectal cancers.

Question 3

- (a) Write notes on **one** of the following:
 - (i) Role of oncogenes and apoptosis-related genes in the development of cancer
 - or*
 - (ii) Role of viruses in carcinogenesis
- (b) Describe the macroscopic features that may allow differentiation between benign and malignant neoplasms.

Question 4

A 38 year old woman presented to her local doctor with a 2 month history of bleeding after intercourse. More recently she had a spontaneous bloodstained discharge. After a series of investigations the woman underwent a hysterectomy.

- i) What is the likely diagnosis? How could this have been confirmed preoperatively?

- ii) Discuss the pathogenesis of the disease listed in part i. How might his disease have been prevented?

- iii) If this woman had not undergone treatment how might have her disease progressed?

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 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.

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 Perspex and contain a range of preserving chemicals that may be harmful. Chemicals used may include formalin, pyridine and sodium dithionate. A full list of chemicals and associated information is available at the Health and Safety (H&S) station in the Museum and on the SoMS website.

Chemical	Max. 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 or broken, do not attempt to wipe up the spillage. Clear the area and immediately inform the Museum Manager or a member of academic staff. A spill kit will then be used to absorb the fumes.
- 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 health and safety policies of UNSW visit this web site.
<http://www.ohs.unsw.edu.au/>