



ONTARIO VETERINARY COLLEGE
Department of Pathobiology

PATH*3610 - PRINCIPLES OF DISEASE, 2013

CALENDAR DESCRIPTION

A course designed for students with particular interests in nutrition and biology. The course presents basic concepts of disease in the cells, tissues, organs and fluids of the body. Emphasis will be on disease processes resulting from physical, toxic and microbiological and other causes.

COURSE COORDINATOR

Dr. Rob Foster Rm 3842 Pathobiology Phone ext. 54648 pod@uoguelph.ca

INSTRUCTORS

Dr Rob Foster
Dr John Lumsden Rm 4823 Phone ext. 54519 jsl@uoguelph.ca
Dr Jeff Caswell Rm 3828 Phone ext. 54555 jcaswell@uoguelph.ca

COURSE OBJECTIVES

This course will allow you to integrate anatomy, physiology and the mechanisms of disease so that, with a basic knowledge of the organ or tissue, you can explain the effect of a disease on the host and its therapy. You will be able to interpret medically related articles in the popular press, and medically related discussions in an objective and scientific manner. The vocabulary of medicine is acquired in the process. The response of the body, tissues and cells is studied and this enables an understanding of the significance of some common pathologic processes and disease entities, and permits objective reading and assessment of popular and, to a limited extent, scientific literature.

To achieve this, examples of common and/or important diseases such as those caused by physical, toxic and biological agents and metabolic and nutritional imbalances are used. The means by which disease is induced and the response of the organism are emphasised.

At the end of this course you will be able to

1. Define medical terms used in general pathology and in diseases of body systems
2. Outline the principles of prevention and therapy of any disease at a basic level
3. Describe the response and outcome of injury in the major organs of the body, particularly the skin, stomach and intestines, bone marrow and blood, lungs, liver, kidneys, genital organs, heart and vessels, brain and spinal cord, and bones and joints using a knowledge of anatomy and physiology at a basic level.
4. List the clinical signs seen when each organ fails and explain why each clinical sign occurs based on the specific function of the organ.
5. Explain the general approach to treatment of a disease, and when given basic information about a disease, provide general, specific and appropriate examples of treatments.

COURSE CONTENT

The course is divided into 2 main parts. The first part is general mechanisms of disease (general pathology) and the second takes a systems approach to the principles of disease (systems pathology).

Part 1 General Principles of Disease

1. Introduction to concepts of disease.

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- 2. Cellular injury degeneration and necrosis including mechanisms of cell injury, alteration to cells, the response of cells.
 - 3. Circulatory and vascular changes including fluid and hemodynamic derangement associated with diseased or inflamed tissues, thrombosis, embolism, infarction, and shock.
 - 4. Immune mechanisms, immune-related diseases.
 - 5. Inflammatory processes, including acute and chronic inflammation, and their systemic affects, healing and tissue repair, including regeneration, wound healing and modification of the repair response.
 - 6. Mechanisms of disease caused by viruses, bacteria and other agents.
 - 7. Cancer: degree of malignancy, predisposition, causes and consequences.

Part 2 Pathology of body systems

- 1. Mechanisms of disease related to enteric, hematopoietic hepatobiliary and pancreatic, urogenital, cardiovascular, nervous, respiratory, and musculoskeletal systems.

Specific diseases of animals and humans will be used to illustrate concepts and mechanisms under discussion. Further examples are provided at <http://www.uoguelph.ca/~pod>, user id path, password 3610

COURSE WEBSITE AND EMAIL ADDRESS

Website

<http://www.uoguelph.ca/~pod> User name: path, Password: 3610

Email address

pod@uoguelph.ca

REFERENCE MATERIAL

Required Textbook

Principles of Disease – Course Notes (Coursepack from bookshop or electronic notes on course website).

Recommended

'Basic Pathology', 9th Edition. V. Kumar, A Abbas, J Aster. Saunders Elsevier. 2013.

Medical dictionary or ready access to an online dictionary

For Further Reading

'Pathological Basis of Veterinary Disease' 5th ed, MD McGavin and JF Zachary. Mosby Elsevier. 2011

'Robbins and Cotran: A Pathological Basis for Disease', 8th Ed., V. Kumar, A Abbas, N Fausto, JC Aster. Saunders Elsevier. 2010.

'Textbook of Medical Physiology'. A.C. Guyton. W.B. Saunders, Toronto. (latest version)

Merck Manual

WWW

<http://www.uoguelph.ca/~pod> User name: path, password: 3610

Merriam Webster online (<http://www.m-w.com/mw/netdict.htm>)

Medical sites

<http://www.uoguelph.ca/~rfoster> Use links to 'Academic sites'

ELECTRONIC RECORDING OF CLASSES

"Electronic recording of classes is expressly forbidden without prior consent of the instructor. This prohibition extends to all components of the course, including but not limited to lectures or any other situation. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced or transmitted to others without the express written consent of the instructor"

EVALUATION

Formative evaluations

All term tests must be the student's own work. These are term tests (midterms) and worth 40% of the final grade. Both will be held in class time. The first will be based on the first part of the course. It will be worth 15% of the course mark. Results will be published in CourseLink.

The second term test will be worth 25%. It will cover all parts of the course up until the date of the second midterm. Exams will be handed back. Results will be published in CourseLink.

The term tests (formative evaluation) are administered by the course co-ordinator. Alternate examinations are only available to those people obtaining permission from the course coordinator in accordance with University policies and procedures. Redistribution of weightings of formative evaluations may be made under exceptional circumstances only.

Final (summative) Examination

The final examination must be the student's own work. The final examination is worth 60% and requires a synthesis of all material and skills learnt during the entire course, thus it is a summative evaluation. No alternate examination is planned, but students with appropriate reasons will be considered for a deferred examination.

Alternate examinations

Academic Consideration for an alternate examination for the formative evaluations includes medical, psychological, and compassionate grounds as indicated in the University Undergraduate Calendar.

It is the student's responsibility to inform the instructor in charge of the course in writing immediately. Use the University email system. Only provide documentation if the instructor requests it.

Complete and submit any missed work by the new deadline established by the instructor.

Alternate examinations will differ from that given to the remainder of the class, and will be held after the posted time of the particular examination.

Academic Consideration for a final examination is handled by the Academic Review Subcommittee of the students program. Contact the Course Coordinator, who will make the appropriate recommendation to the Academic Review Committee.

Previous examination papers

The examination questions from a second midterm and a final examination are available on the POD website (<http://www.uoguelph.ca/~pod>).

Understanding what is required in written questions.

Written questions are of a similar format to the examples provided on the POD website. General principles of pathogenesis, therapy and prevention are evaluated. It is therefore important to provide general outlines or information, and to supplement this with specific information where available. Mechanisms and pathogenesis of disease are emphasized in the course, so these will be assessed. Understanding medical terminology, anatomy and physiology is an integral part of this course.

EVALUATION OF TEACHING

"Students will be asked to complete a questionnaire on instructors' teaching competence during the last two weeks of classes. This is part of information required by the University to evaluate faculty performance for purposes of Tenure, Promotion and Selective Increases. Administered by a third party rather than the instructors, these evaluations will be delivered to the respective instructors ONLY after the final grades have been submitted to the Registrar's Office. Note: only the numerical ratings from the form will be made available to the Chair for administrative purposes--the Chair will NOT see any comments that are written on the evaluation forms. Students are welcome to visit the Pathobiology Chair's office at any time during the semester to preview the questionnaire. If students wish comments to be considered in performance review of the faculty member, signed comments should be sent to the Department Chair. The faculty member will have the opportunity to read such comments and respond to the Chair, prior to performance review."