

YORK UNIVERSITY
KINESIOLOGY AND HEALTH SCIENCE

PHYSIOLOGY 2: HH KINE 3012
Sections M, N
WINTER 2017

COURSE DIRECTORS: T. HAAS, M. CONNOR

Course Notes Package: **Required.** Lab Manual: **Required**

Purchase both at York Lanes Bookstore.

Textbook (**Strongly Recommended**): Human Physiology *From Cells to Systems*
2nd Canadian Edition; L. Sherwood and R. Kell. Nelson Publishers

PRE-REQUISITE: HH KINE 2011 3.0

COURSE OBJECTIVES:

- To understand the mechanisms by which the human body maintains appropriate function of critical organ systems and to relate this understanding to processes of disease.
- Laboratories compliment the course material and emphasize the clinical significance and the effect of disease on respiratory, cardiovascular and renal function.

Students will be able to:

- *Integrate knowledge of cell physiology and apply it to understanding of organ systems function.*
- *Describe relationships between physiological parameters through words, graphs and flow charts*
- *Demonstrate computational skills to calculate physiological parameters*
- *Discuss the application of physiology concepts to the understanding of health and disease*

EVALUATION:

Mid Term Exam I	25%
Mid Term Exam II	25%
Lab Quizzes	5%
Comprehensive Final Exam	35%
Comprehensive Lab Exam	10%

CONTACT INFORMATION

Course Directors ****Contact Dr. Haas for all course administrative issues****

****Dr. Tara Haas**
4th Floor, Life Science Building

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Dr. Michael Connor
4th Floor, Life Science Building

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Office hours: Will be announced in lecture

Laboratory Coordinator

Marco Colavecchia
316 Lumbers
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GRADING AND EXAM POLICIES

Grading: The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York. For a complete description of York grading system, refer to: http://calendars.registrar.yorku.ca/pdfs/ug2004cal/calug04_5_acadinfo.pdf

Missed Exams: Students must have a documented urgent reason for missing a course exam, such as illness, compassionate grounds, etc., which is confirmed by appropriate supporting documentation (e.g., attending physician's statement). **Doctor's notes do not suffice.**

Documentation must be submitted to the course director within 1 week of the missed test/exam. **Legitimacy of this documentation will be confirmed by Dr. Haas. False documentation will result in charges of breach of academic integrity.** Students with acceptable documentation will have the weight of that exam added to their final exam. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

For more information about York's Academic Honesty Policy and Procedures, refer to the documentation: <http://health.yorku.ca/current-student-information/academic-honesty/>

ADDITIONAL EXAM INFORMATION

1. In the lecture part of the course you will be responsible for and will be examined on the material presented in class. The textbook is your resource and will help you understand this material. It contains many of the visuals presented in the lectures. Pay careful attention to the Figures and to the questions and guidelines for study at the end of each chapter. You are **NOT** responsible for sections of the text that are not covered in lecture.

2. The midterm exams will consist of multiple choice questions. Laboratory material will **NOT** be on the midterm exams but will be covered in the laboratory final (during the final exam).
3. Your **comprehensive** final will be given in a three hour block during the Winter exam period (April). It will be predominantly multiple choice, with some short answer questions. The exam will be divided into two parts:
Lecture exam: 60% of these questions will come from material covered since the second midterm; 40% will be based on material from the first half of the course.
Laboratory exam: Will emphasize the techniques, procedures and calculations and interpretations included in the lab exercises.
4. If you miss the final exam, the **makeup will be held in Summer 2017**. The date will be announced later on in the term. **This is not automatic. You must first bring the appropriate paperwork to Dr. Haas no later than 1 week after the date of the final exam. Failure to do so will result in a grade of zero on the exam.**
5. Under no circumstances will makeup exams be provided because of conflict with vacation plans or work conflicts.

LAB INFORMATION

1. **Attendance:** Lab attendance is **compulsory**. Absences due to excusable situations (i.e. sickness or death) will only be accepted with a note from a physician or other responsible person. The note must be signed and have a telephone number at which the person can be contacted. For University sponsored trips/sporting events, a letter from the relevant faculty/staff member, with their contact information, must be provided to the Lab Instructor.
2. You must attend the laboratory section in which you are enrolled. Switching laboratory sections is **not permitted**.
3. **Quizzes:** Each lab section will get a lab quiz that consists of 3-5 general questions on the lab for that day. The quiz for each section will be different. **YOU MUST PREPARE AHEAD OF TIME BY READING THE LAB.** Your **lab grade** (combination of quizzes and lab exam) is worth 15% of your final grade. Quizzes missed because of lateness or during unexcused absences may not be made up. ***Quiz grade will be zero if you do not attend the entire lab session.***
4. Makeup quizzes will **NOT** be provided. With appropriate documentation (refer to point 1 above), the weight of a missed quiz will be shifted to the lab exam.
5. You must purchase a **new lab manual** by the time your lab meets for the **FIRST** time. The TA will check to see that you have a manual with your name written in ink on the cover.

Safety:

1. Some experiments will require the handling of body fluids (blood, urine) and hazardous

chemicals. It is imperative that you follow the instructions for handling and disposing of these materials. Teaching Assistants will provide specific guidelines for handling these materials whenever required.

2. Avoid wearing contact lenses in the laboratory, especially if they are soft. Some volatile chemicals can be absorbed by contacts. Wear glasses and safety goggles instead.
3. Absolutely no food or drink is allowed in the laboratory at any time.
4. Each group is responsible for cleaning up their station at the end of the laboratory session. The Teaching Assistant will clear each station and check attendance before dismissing your group.

*****Missing an exam or lab due to weather will be excused ONLY if the University closes/cancels classes.***

In all other cases, it is YOUR responsibility to get to class/lab on time.**

MOODLE COURSE SITE FOR KINE 3012

This is an online resource for this course. It will be used to access your grades, for posting questions relating to course material, and to access other course-related resources/study tools.

Log-on to Moodle regularly to check for new information, available grades and to read/respond to discussion questions.

Lecture capture will be offered for this course. *Please be aware that technology sometimes fails, and it is NOT the responsibility of the course director to offer alternatives to the lecture recording in the occurrence of a technological problem.*

All material posted on Moodle, including lecture recordings, is designed as a learning aid to supplement your usual studying techniques AND IS NOT A SUBSTITUTE FOR ATTENDING LECTURE!

Discussion postings should include only course-related material. Always correspond on Moodle using appropriate language.

GENERAL COURSE POLICIES FOR STUDENTS AT YORK UNIVERSITY

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (see Reports, Initiatives, Documents) <http://secretariat-policies.info.yorku.ca/>

TOPICAL INFORMATION

I. HOMEOSTATIC CONTROL SYSTEMS

- A. characteristics of homeostatic control systems
- B. feedback and feedforward
- C. the balance concept
- D. local homeostatic control

II. RESPIRATORY PHYSIOLOGY

- A. organization of the system
- B. alveolar ventilation
- C. gas exchange
- D. O₂ and CO₂ transport
- E. regulation of respiration
- F. hypoxia

III. CARDIOVASCULAR PHYSIOLOGY

- A. organization of the heart and vasculature
- B. relationships between pressure, flow and resistance
- C. physiology of the heart
- D. physiology of the vascular system
- E. regulation of mean arterial pressure
- F. cardiovascular function in health and disease

IV. RENAL PHYSIOLOGY

- A. basic renal processes
- B. renal regulation of sodium, potassium and water
- C. regulation of plasma volume
- D. calcium regulation
- E. hydrogen ion regulation