

**YORK UNIVERSITY  
KINESIOLOGY AND HEALTH SCIENCE**

**PHYSIOLOGY 2: HH KINE 3012  
Sections M, N  
WINTER 2019**

**COURSE DIRECTORS: T. HAAS, M. CONNOR**

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**PRE-REQUISITE:** HH KINE 2011 3.0

**Course Notes:** Available on Moodle    **Lab Manual:** Required to Purchase at York Bookstore

**Textbook (Recommended):** Human Physiology *From Cells to Systems*  
4th Canadian Edition; Sherwood and Ward. Nelson Publishers

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**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*

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**EVALUATION:**

|                          |            |     |
|--------------------------|------------|-----|
| Mid Term Exam I          | February 8 | 20% |
| Mid Term Exam II         | March 15   | 20% |
| Lab Quizzes              |            | 5%  |
| Comprehensive Final Exam |            | 40% |
| Comprehensive Lab Exam   |            | 15% |

## CONTACT INFORMATION

### Course Directors

**\*\*Contact Dr. Haas for all course administrative issues\*\***

**\*\*Dr. Tara Haas**  
4<sup>th</sup> Floor, Life Science Building  
Email: [k3012@yorku.ca](mailto:k3012@yorku.ca)

Dr. Michael Connor  
4<sup>th</sup> Floor, Life Science Building  
Email: [k3012@yorku.ca](mailto:k3012@yorku.ca)

**Office hours:** Will be announced in lecture

### Laboratory Coordinator

Marco Colavecchia  
316 Lumbers  
Email: [colavem@yorku.ca](mailto:colavem@yorku.ca)

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## GRADING AND EXAM POLICIES

**Grading:** Although numeric scores are assigned to each graded item, final grades will be assigned in accord with the descriptions of the 9- point letter-grading scale used in undergraduate programs at York. For a complete description of York grading system, refer to:

<https://calendars.students.yorku.ca/2018-2019/academic-and-financial-information/academic-information/grades-and-grading-schemes> .

**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.** Conflict with vacation plans or work schedules do NOT constitute legitimate excuses for missing an exam. Documentation must be submitted to the course director or submitted to the undergraduate office (Bethune 341) within 1 week of the missed test/exam. **Legitimacy of this documentation will be confirmed by Dr. Haas.**

Students with acceptable documentation will have the weight of that exam added to their final exam. Further extensions or accommodation will require submission of a petition to the Faculty.

Students with conflicts due to University sponsored trips/sporting events must contact Dr. Haas in advance to discuss possible accommodations. A letter from the relevant faculty/staff member, with their contact information, will be needed as supporting documentation.

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

**Cheating, sharing exam answers or submission of false documentation are examples of behaviour that will result in charges of breach of academic integrity.**

## **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. The questions and guidelines for study at the end of each chapter can be useful study aids. 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). 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 **deferred exam will be held in Summer 2019.** The date will be announced later 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. **Students who miss both midterm exams and the final exam must file a petition with Faculty of Health for permission to write a deferred exam.**

**LAB INFORMATION:** Your lab grade (quizzes and lab exam) is worth 20% of your final grade.

1. **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. Quiz grade will be zero if you leave the lab early.**
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.

## Lab 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 will be used to provide lecture slides and to access other course-related resources/study tools, for posting questions relating to course material and to see your grades.

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 AND IS NOT A SUBSTITUTE FOR ATTENDING LECTURE!

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

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## **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. O<sub>2</sub> and CO<sub>2</sub> 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