Food, Nutrition and Health (FNH) Program
Faculty of Land and Food Systems

FNH 161: INTEGRATED PHYSIOLOGY FOR HUMAN NUTRITION II (3 credits)

ACKNOWLEDGMENT:

UBC's Point Grey Campus is located on the ancestral and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on in their culture, history, and traditions from one generation to the next on this site.

INSTRUCTOR:

Elizabeth Novak, PhD
Lecturer, Food Nutrition and Health Program

CONTACT:

Office hours: **Tuesdays & Thursdays 11-12 PM in FNH 160H,** 2205 East Mall
Zoom office hours available by appointment
For questions related to course content, please post on **Piazza (discussion board available on Canvas)**.
For confidential questions, the instructor can also be reached at via the **Canvas email tool**

TEACHING ASSISTANTS:

Taylor Bailey – Graduate Student, Human Nutrition
Mahnoor Rahat- Undergraduate Student, FNH
Kailee Wark – Graduate Student, Nutrition & Dietetics

LECTURE TIME & LOCATION:

Tuesdays & Thursdays, 12:30 - 2:00 PM
MacMillan 360

PREREQUISITES: FNH 160

COURSE DESCRIPTION:

Basic principles in human physiology, including function of the cardiovascular, immune, respiratory, urinary and reproductive systems, integration across systems, maintenance of homeostasis, and application to human nutrition

LEARNING OBJECTIVES:

1. **Understand** the basic anatomy and physiology of the cardiovascular, lymphatic and immune, respiratory, urinary, and reproductive systems.
2. **Describe** the role of the urinary and respiratory systems in acid base balance
3. **Explain** how integration across the body systems is necessary for normal body processes and maintenance of homeostasis and health
4. **Apply** knowledge to real-life cases relevant to human nutrition

COURSE FORMAT:
This course will be delivered through **3 hours of in-person class time each week**. Classes will include a combination of lectures, demonstrations, and interactive questions and discussions. Online materials, including course notes, practice questions, and discussion boards will be available on Canvas to support your learning.

COURSE MATERIALS:

- **Canvas:** The FNH 161 Canvas site will be used as an important learning and communication resource providing lecture slides, quizzes and assignments, discussion boards, and course announcements.
- **iClicker cloud:** Students are required to have an iClicker device (eg. phone, tablet, or laptop) and account registered to their name and student number
- **Recommended textbook:** Sherwood L, Ward C. Human Physiology from Cells to Systems. 5th Canadian Ed. 2018. Cengage. Older and US versions are acceptable.

EVALUATION:

1. Online quizzes (9 @ 2% each)	18%
2. Case studies (3 @ 4% each)	12%
3. Participation	5%
4. Midterm exam	25%
5. Final exam	40%

Online quizzes: Online quizzes will be held on Canvas and will include multiple-choice and short answer questions. These are intended to help you stay up to date and identify areas in which you may require additional instruction or review. You will only have one attempt for each quiz. You are encouraged to review your notes in preparation for the quizzes and use these to help you prepare for exams. Quizzes will open on Thursdays and close the following Wednesday at 11:59 pm.

Case Studies: Case studies are designed to help you apply course content to scenarios relevant to nutrition and disruptions of homeostasis. Assignments will be posted on Canvas and must be submitted by 11:59 pm on the dates provided in the course schedule.

Class participation will be assessed through iClicker question and contribution to the course discussion board. Marks will be given for participation, not correctness. iClicker questions will be posed during class and may be answered in class or from home while viewing the live stream lecture. Students will receive 3 marks for participation in at least 80% of classes, 2 marks for participation in 65-79%, and 1 mark for participation in 50-64%. In addition to iClicker, students will be asked to contribute questions and answers to the course discussion board. More information on the discussion board requirements will be posted on Canvas.

Midterm and final examinations: The examinations will test your understanding of all material covered in class. Both the midterm and final examinations will include multiple choice and short-answer questions.

Policy on late and missed assessments: Quizzes and assignments must be completed independently and submitted by the deadlines indicated in the course schedule. Late quizzes will not be accepted, as the answers will be revealed after the closing date. Late assignments will be subject to a 10% deduction per day late. In the event where a student must miss a quiz, assignment, or midterm, with a valid excuse, the corresponding mark will be allocated to the final exam.

STUDENT RESPONSIBILITIES:

1. **Attend and engage in class.** Come prepared to listen, take notes, and participate in class.
2. **Review** the course material before and after class. Use the suggested chapters of the textbook to clarify any unclear concepts. Looking at the material multiple times, and trying to recall (testing yourself, not just reading) will help solidify your understanding.
3. Use the **resources** available to you (instructor, Canvas site, discussion board, textbook, quizzes, and assignments) to enhance your learning.
4. **Ask questions** both in and out of class. You can post your questions about course content on the Piazza discussion board or bring your questions to the instructor's office hours. Please always remain respectful when speaking in class or posting online.
5. **Collaborate** with peers. Create study notes and organize study sessions. Working together increases productivity and problem solving and can make study time more enjoyable. Your peers can also help you catch up if you need to miss a class.
6. **Submit your own work.** Collaboration during class and study time is encouraged but all submitted work must be your own, unless specifically indicated in class. **This also extends to the use of AI tools, including ChatGPT, which may not be used for course assessments.** Academic honesty is a core value of scholarship and is taken extremely seriously in this course. Failure to follow the appropriate policies, principles, rules, and guidelines of the University with respect to academic honesty may result in disciplinary action.
7. **Connect** concepts from this course to knowledge gained in other courses and your own experiences. Try to **apply** what you learn in this course to your own life.

ASSISTANCE AVAILABLE TO STUDENTS:

The instructor is available during office hours if you have questions, or suggestions for the course. You may also post questions about course material on the course Piazza discussion board. Piazza will be monitored by your teaching assistants. Students are also encouraged to answer each other's questions.

UNIVERSITY POLICIES:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website (https://senate.ubc.ca/policies-resources-support-student-success).

Academic honesty is a core value of scholarship. Cheating and plagiarism (including both presenting the work of others as your own and self-plagiarism), are serious academic offences that are taken very seriously in the Faculty of Land and Food Systems. By registering for courses at UBC, students have initiated a contract with the University that they will abide by the rules of the institution. It is the student's responsibility to inform themselves of the University regulations.
Definitions of Academic Misconduct can be found on the following website:
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,959#10894

Studying with others or discussing issues with them is completely legitimate and is encouraged; however, collaborating with others while completing case studies or quizzes is not, nor is informing others of what the questions were. Both providing this information to someone else, or using that information, are considered cheating and would constitute academic misconduct. Please be aware that plagiarism or cheating of any kind will be cause for "no credit" on the assignments and possible failure in the course.

COURSE TOPICS AND SCHEDULE*

WEEK	TOPICS	ASSESSMENT	TEXTBOOK READINGS
Introduction & Levels of Organization			
Jan 9	**Introduction** – Course overview. Review of basic concepts from FNH 160.		Review: Ch 1-8
Jan 11- Feb 8	**Cardiovascular system:** Anatomy of the heart, electrical activity, cardiac output, vascular physiology, blood.	*Weekly quizzes will begin on Jan 18. Quizzes will be released each Thursday and are due by Wednesday at 11:59 pm. **Case study 1: Due** Feb 8	Ch 9-11
Feb 13	**MIDTERM EXAM** - in class		
Feb 20-24	***Reading week – no classes***		
Feb 15-29	**Immune system:** External defenses, adaptive and innate immunity. **Integration:** Lymphatic system and immunity	**Case study 2: Due** Mar 5	Ch 12
Mar 5-12	**Respiratory system:** Anatomy of lungs, respiration and gas exchange, respiratory volumes **Integration:** Respiration and pulmonary circulation		Ch 13
Mar 14-28	**Urinary:** Anatomy of urinary tract, physiology of waste excretion, fluid and acid base balance **Integration:** Interrelated roles of kidneys and respiratory system in acid base balance.		Ch 14-15
April 2-11	**Reproduction and inheritance:** Physiology of female and male reproductive systems, reproduction. **Integration**: Endocrine control of female reproductive system	**Case study 3: Due** April 11	Ch 18

*Schedule subject to change. Instructor will notify students of any changes by Canvas announcements