



HANYANG UNIVERSITY

2019 HISS Syllabus

Human Physiology: the mechanisms of body function

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Dept.: Biological Sciences / Biomedical Engineering

Description: Human Physiology will use a systems approach to provide a foundation for understanding the function of anatomical structures comprising the human body. Students will explore the functions and adaptations of organ systems with emphasis on the neuromuscular, endocrine, cardiorespiratory, gastrointestinal and urinary systems. The major theme will focus upon homeostatic mechanisms integrating physiological responses (from cell signaling to whole organism) to maintain human health and well-being.

Objective:

- To gain working knowledge of terminology in medical physiology.
- To recognize fundamental principles responsible for maintaining normal function of tissues and organ systems of the human body.
- To describe the relationship between different physiological systems to provide homeostasis for the human body.
- To connect the basic physiological functions from cell to tissue to organ to organ system which impact human physiology.

Preparations: No prerequisite required. All of the lecture materials will be provided. We will use an online textbook found at: <https://open.umn.edu/opentextbooks/textbooks/anatomy-and-physiology>.

Schedule:	Week 1	Lecture 1: Introduction to Physiology Lecture 2: Compartmentation: Cells and Tissue Lecture 3: Endocrine System Lecture 4: Central and Peripheral Nervous System
	Week 2	Lecture 5: Skeletal Muscle and Control of Movement Lecture 6: Cardiovascular Physiology Lecture 7: Practice problems / Review session 1 Lecture 8: MIDTERM EXAM
	Week 3	Lecture 9: Respiratory Physiology Lecture 10: Renal Physiology Lecture 11: Digestive System Lecture 12: Growth and Metabolism
	Week 4	Lecture 13: Pathophysiology Lecture 14: Integrative Physiology: Exercise Physiology Lecture 15: Practice problems / Review session 2 Lecture 16: FINAL EXAM

Hanyang International Summer School

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Evaluation:	Midterm (%)	Final (%)	Attendance (%)	Assignments (%)	Participation (%)	Etc. (%)
	40	40	5	10	5	

90-100% (A), 80-89% (B), 70-79% (C), 60-69% (D), ≤ 60% (F)

Exams (Mid-term and Final):

This course has a midterm exam and the cumulative final exam. The midterm exams will be held as “closed-book,” and will be made up of multiple-choice questions based on topics, materials, and discussions presented in class.

Group Projects:

Groups of 4-5 students each will create a short video to explain a fundamental concept related to the course. Each student will be assigned to a group and a topic, and each group will complete only one group project during the semester. Group assignments, details, and deadlines will be provided in class. Video grades have a group and an individual component. The Group Component will be based on instructors’ grades and peer evaluations. The same group project grade will be assigned to all members of a group; each group member is fully responsible for all submitted project work. The group video projects consist of 3 deliverables: a story board, a transcript, and a video posted to *Youtube* or Kakao group chat. The Individual Component includes peer-evaluation of all members of your team and peer-review of a subset of videos from other groups.