

**Human Physiology KINE 304
Course Outline, Spring 2018**

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***best to e-mail to set-up meeting**

Course Description

This course is designed to introduce and familiarize students with basic concepts of human physiology. Following initial discussions on cell structure and function, physiology will be addressed at the organ and systems levels.

Course Objectives

Completion of this course will enhance the student's:

- 1) understanding of basic cell structure/function
- 2) appreciation of the function of human organs
- 3) understanding of the interactions of organs in different physiological systems
- 4) understanding of the manner in which the function of the human organism is dependent upon the appropriate function and interaction of physiological systems
- 5) appreciation of how disruptions of specific organs and/or systems lead to disease and illness

Required Textbook

Vander's Human Physiology, Widmaier, E.P., Raff, H., and Strang, K.T., 14th edition, McGraw Hill Inc., (2016). *Previous editions of the book are fine, just be sure chapter numbers still correspond with correct physiological topic as listed below.

*You can also purchase the on-line version of this book at marked cost reduction

Course Evaluation (dates for 1st 2 exams are not determined beforehand, but will be announced in class at least 7 days beforehand)

Final grades will be based on the following:

Exam #1 = 30%

Exam #2 = 30%

Final Exam (comprehensive) = 40%

Schedule for Lecture Topics

- 1) Cell Structure (ch 3, section A [cell structure])
- 2) Movement of Molecules Across Cell Membranes (ch 4)
- 3) Homeostasis (ch 1)
- 4) Control of Cells by Chemical Messengers (ch 5)
- 5) Neuronal Signaling and the Structure of the Nervous System (ch 6, exclude section on neurotransmitters and neuromodulators [6.13], as well as neuroeffector communication [6.14])

Exam #1

- 6) Sensory Physiology (ch 7, sections 7.1 - 7.5)
- 7) Endocrine System (ch 11, sections 11.1 - 11.14)
- 8) Muscle (ch 9)

Exam #2

- 9) Cardiovascular Physiology (ch 12, *exclude* sections E and F)
- 10) Respiratory Physiology (ch 13)
- 11) Kidneys and Regulation of Water and Inorganic Ions (ch 14)
- 12) Digestion and Absorption of Food (ch 15; sections 15.1 - 15.4)

Final Exam (comprehensive)