



College of Pharmacy

PHPS 606

Human Physiology

Fall, 2012

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Course Coordinator

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Course Title: Human Physiology

Course Number: PHPS 606

Course Credit: 3 hours

Class Time(s) and Location:

Lectures: Day, Time and location TBA

Instructors:

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Prerequisites:

Acceptance into the program.

Course Description:

This course is designed to provide an in-depth overview of topics in human physiology that provide a basis for understanding of pharmacology. The course will begin with a review of basic physiological topics including the autonomic nervous, central nervous and the cardiovascular systems. Following this will be an introduction to the discipline of pathology with an emphasis on diseases of the nervous system. This course will be comprised of recorded lectures, live workshops and synchronous video chat sessions. There is also a requirement of a research paper on a topic of physiology chosen by the student with approval of the Course Coordinator.

A detailed description of assignment and grading rubrics will be distributed at the beginning of semester.

Course Learning Outcomes:

For the purposes of program assessment, two broad program learning outcomes (PLO) have been developed. The PLO number refers to the overall outcomes designed for the successful completion of the MSCP program.

For this course, the successful student will be able to:

Summary of Program Outcomes, Course Objectives and Assessment:

Course Learning Objectives (see below)	Assignment/ Assessment (see below)	Program Learning Outcome	PLO #
1-20	Exams I – V Final exam	define, identify and recognize key concepts of terminology in all content areas	1
Generally 1-20 with a special emphasis on one to three of the objectives.	Research paper	review and explain at a high level of proficiency, both orally and in writing, the most current theories of the pathophysiology, etiology, signs and symptoms underlying mental health disorders and their psycho-pharmacologic treatment	2

Course Learning Objectives:

At the completion of this course, the student should be able to:

- 1) Describe the mechanisms that the body uses to maintain homeostasis.

- 2) Describe the structure and function of a neuron and define graded and action potentials.
- 3) List the components of the synapse and describe the major neurotransmitters.
- 4) List and describe the effectors of the autonomic nervous system.
- 5) Describe the two divisions of the autonomic nervous system including neuronal pathways, neurotransmitters and receptors.
- 6) List the different areas of the brain and describe their function.
- 7) Describe the major neurotransmitters of the central nervous system.
- 8) List the components of the respiratory system, including the structure and function of each.
- 9) Describe the process of alveolar ventilation and the process of gas exchange and transport.
- 10) List each component of the digestive system and describe its structure and function.
- 11) Describe the structure and function of the heart.
- 12) Describe the structure and function of the blood vessels.
- 13) List the components of the blood and their function.
- 14) List the components of the nephron and describe the structure and function of each.
- 15) Describe the mechanisms involved in control of sodium and water levels by the kidneys.
- 16) List the different endocrine organs and describe the hormones and function associated with each.
- 17) Define general terms associated with pathology
- 18) Describe cell adaptation, intracellular accumulation, and the types of cell death.
- 19) Define inflammation as a common reaction of tissues to an injury; know types and mechanisms of inflammation and tissue repair.
- 20) Define nervous system disorders; know types, pathogenesis, and clinical manifestations associated with these disorders.

Course Assessment:

Assessment Tool	Points*
Exam I	50 points
Exam II	50 points
Exam III	50 points
Exam IV	50 points
Exam V	50 points
Exam VI	50 points
Final	50 points
Research paper	50 points
TOTAL	400 points (100 %)

* Students may receive up to 5 extra credit points per course by submitting written exam-style questions, which they will present to the other students during video chats.

Exams will be in multiple choice format (50 points). The research paper will be no less than 20 pages with 30 primary references on a topic germane to physiology. The topic will be determined by the student with the approval of the Course Coordinator. A rubric for grading of the paper will be provided early in the semester.

Course Grade Scale (%):

A	92-100	B-	79-81
A-	89-91	C+	76-78
B+	86-88	C	70-75
B	82-85	F	less than 70

Required Text and Readings:

Required Text:

Cohen, B.J. **Medical Terminology, an Illustrated Guide.** 5th Edition.

Recommended Texts:

Sherwood, L. **Human Physiology; From Cells to Systems.** 6th Edition. (Physiology text)

McCance KL and Huether SE. **Pathophysiology: The Biologic basis for Diseases in Adults and Children** (Pathophysiology text)

Online Course Provisions:

Course material will be provided using a variety of tools. Pre-recorded lectures, slides, course syllabus, course calendar, assignments, announcements and multiple choice exams will be posted to the Laulima website, which students will be able to access on a 24/7 basis. Pre-recorded lectures will be in either a .mov format or as a url to an archived recording. Video chats will be held using an online meeting service and students will be provided training at the beginning of the semester. For more information pertaining to UHH online course tools, see <http://www.uhh.hawaii.edu/academics/dl/index.php>.

Students are expected to attend live online video chats. It is recognized that students may occasionally have professional duties that interfere with participation in live online or on-site course offerings. In those instances, as well as for purposes of review, recordings of these offerings will be provided to students. Students are expected to notify the course coordinator if they will not be able to attend a video chat.

Professionalism Policies:

Make-up exams (due to illness or approved extenuating circumstance) will generally only be given if the instructor is notified prior to the examination. Failure to take an exam will count as a zero on that exam.

Missing Exams: Documentation will be required for all missed exams. **Requests for re-grading exam questions** may result in the entire exam being re-graded. Point total errors can be corrected without re-grading the entire exam.

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Vacations and personal time off is not encouraged but may be allowed during the course of the semester. It shall be the student's responsibility to notify the Course Coordinator a minimum of two weeks prior to the pre-arranged time off. Furthermore, it will be the student's responsibility to complete and submit any assignments on or before the date due if such date falls during the course of pre-arranged time off.

Late or Incomplete Assignments: Points may be deducted at the Coordinator's discretion for late or incomplete assignments.

Cell Phones, Pagers & Other Communication Devices:

All cell phones, pagers etc. are to be on **silent mode** during class or **turned off!** Cell phones and pagers are **NOT** to be answered during video chats.

Dress Code:

Students are expected to dress in an appropriate professional manner.

Attendance Policy:

University of Hawai'i Hilo encourages 100% attendance by students at all course-related sessions, lectures, laboratories, and clinical assignments. Each college or department has the prerogative to establish its own attendance requirements and policies. Unless a department's policy differs, class attendance is mandatory for all students for the first session of each course in each quarter as well as on the first day of class after scheduled vacations and University holidays. If illness, a personal emergency, personal incapacitation, or other exceptional problem of a serious nature causes a student to be absent from a session requiring mandatory attendance, the student must immediately notify the course coordinator and follow stated course policies and procedures. Unexcused absences during these or other mandatory attendance sessions may result in course failure.

Examination Decorum:

Students are expected to maintain a demeanor that is consistent with academic and professional standards during examinations. Upon entry into the examination site, students must place all books, notes, study aids, hats, coats and personal possessions on the floor (back or front of the room). Students are to be seated and ready to take an examination at the posted starting time for the exam. Acts of academic dishonesty will be dealt with as defined in the UHH-CoP Graduate Handbook.

Academic Honesty:

Academic honesty and integrity are expected of all students throughout their course of study at UHH-CoP. Any violation of this code is considered to be a serious academic violation and may result in a reprimand, monetary fine, written warning, academic and/or disciplinary probation, suspension, or dismissal. Academic dishonesty constitutes a breach of academic integrity that violates the academic foundation of an institution and compromises the integrity and well-being of the educational program. The policies on students' academic and professional responsibilities are included in Graduate Handbook UHH-CoP.

Students with Disabilities:

Any student with a documented disability who would like to request for accommodations should contact the University Disability Services Office (933-0816 (Voice), or 933-3334 (TTY), shirachi@hawaii.edu, Hale Kauanoe A Wing Lounge), as early in the semester as possible.

Final Schedule of Lecture Topics: **KEY:** Video chat  Tripler live 
Exams  **Research paper** 

Week	Day	Week of:	Contact	Topic	Faculty
1	Labor Day	3 September	1	Intro - Information Resources	Knehans
			2	Cell Physiology & Homeostasis	Connelly
			3	Cell Physiology & Homeostasis	Connelly
			4	Nervous System Physiology	Connelly
	Friday	7 September	5	On-site workshop - ANS	Fisher
2	Monday	10 September	6	Epidemiology Workshop & Course Orientation	Steinman
			7	Introduction to Epidemiology	Steinman
			8	Introduction to Epidemiology	Steinman
			9	Introduction to Epidemiology	Steinman
		14 September		Exam one 1-9	

3		17 September	10	Nervous System Physiology	Connelly
			11	Nervous System Physiology	Connelly
4		24 September	12	Autonomic Nervous System	Connelly
			13	Autonomic Nervous System	Connelly
			14	Autonomic Nervous System	Connelly
	Thursday	4 October	15	Video chat 1	Steinman
	Friday	5 October		Exam two 10-15	
5		1 October	16	Central Nervous System	Connelly
			17	Central Nervous System	Connelly
			18	Central Nervous System	Connelly
6	Columbus Day	8 October	19	Sensory Physiology	Connelly
			20	Sensory Physiology	Connelly
	Thursday	11 October	21	Video chat 2	Steinman
	Friday	12 October		Exam three 16-21	
7		15 October	22	Gastrointestinal Physiology	Connelly
			23	Gastrointestinal Physiology	Connelly
			24	Gastrointestinal Physiology	Connelly
8		22 October	25	Cardiovascular Physiology	Connelly
			26	Cardiovascular Physiology	Connelly
			27	Cardiovascular Physiology	Connelly
	Wednesday	24 October	11:58pm	Topic for research paper due	
	Thursday	25 October	28	Video chat 3	Steinman
	Friday	26 October		Exam four 22-28	
9		29 October	29	Blood and Homeostasis	Connelly
			30	Renal Physiology	Connelly
			31	Renal Physiology	Connelly
			32	Renal Physiology	Connelly
10		5 October	33	Pulmonary Physiology	Connelly
			34	Pulmonary Physiology	Connelly
			35	Pulmonary Physiology	Connelly
	Thursday	8 November	36	Video chat 4	Steinman
	Friday	9 November		Exam five 29-36	

11	VETERAN'S DAY	12 November	37	Endocrine Physiology	Steinman
			38	Endocrine Physiology	Connelly
12		19 November	39	Endocrine Physiology	Connelly
			40	Intro to Pathology	Konorev
			41	Intro to Pathology	Konorev
	Thursday	22 November		THANKSGIVING	
13		26 November	42	Cell injury	Konorev
			43	Cell injury	Konorev
			44	Cell injury	Konorev
	Thursday	29 November	45	Video chat 5	Steinman
	Friday	30 November		Exam six 37-45	
14		3 December	46	Inflammation	Konorev
			47	Inflammation	Konorev
			48	Inflammation	Konorev
	Sunday	9 December	11:58pm	Research paper due	
15		10 December	49	Nervous System Disorders	Konorev
			51	Nervous System Disorders	Konorev
	Thursday	13 December	52	Video chat 6	Steinman
	Friday	14 December		Final exam 46-52	