HUMAN PHYSIOLOGY I
BIPN 100 (Summer, 2017)

INSTRUCTOR: Chris Armour, M.D., Ph.D., office: YORK 4070D
phone: (858) 534-8571 email: carmour@ucsd.edu
Office Hours:
Tuesdays (not 7/18 or 8/1) and Thursdays 2:30 - 3:30 p.m.

INSTRUCTIONAL ASSISTANTS:

Section Time	Location	Office Hours

SEE SECTION/OFFICE HOURS LIST

This course covers the physiology of the nervous, muscular, endocrine, cardiovascular, and renal systems. There will be two lectures (Solis Hall 107, Tuesdays/Thursdays 11:00 am - 1:50 pm) per week. Two midterms and a comprehensive final will be given.

	Topics	Date	Grade
Midterm #1	Nerves, Nervous Systems, Skeletal and Smooth Muscle	July 18 (11:00 - 12:30 Solis 107)	30%
Midterm #2	Endocrine System, Cardiac Muscle, Circulatory System	August 1 (11:00 - 12:30 Solis 107)	30%
Final	Renal System, Fluid Balance, and Everything Else	August 5 (11:30 - 2:30)	40%

REQUIRED MATERIALS

- Text: Human Physiology, Silverthorn; 7th edition (6th and 5th edition reading lists also provided)
- Materials on TritonEd (syllabus, detailed course outline, problem sets, old exams, etc.)

DROP DATES: Check the Summer Session calendar

PROBLEM SETS: They consist of questions that will help you evaluate your understanding of the material covered in the lectures and the reading. In most cases they are similar to exam questions. Treat them like exams (answer the questions before looking at the answers). Those who work through the problem sets (and practice exams) are more likely to receive higher grades. These problems sets are to aid in studying and generate discussion. They are not turned in or graded.

NO CHEATING: You are not allowed to use cheat sheets or cell phones, look at other students' work, or use any kind of help during the exams. Students caught cheating will receive 0 points for that exam, an "F" in the course, and will be reported to their dean for further administrative action. I also consider it unethical to study from old exams that other students don't have access to (this includes materials from friends/fraternities/sororities/the internet/etc.).

BIPN 100 SCHEDULE (Summer, 2017)

LECTURE	DATE	TOPICS	READINGS (Silverthorn 7th ed.)
#1	July 6	Background	(1-23, 123-152)
		Neuron Structure/Function	(227-236)
		Membrane Potentials	(153-160, 236-242)
		Action Potentials	(242-253)
		Synaptic Transmission	(253-268, 371-373)
MAKEUP LECTURE ON FRIDAY JULY 7 (since we didn't have a lecture on July 4)			
#2	July 7	Central Nervous System Organization	(275-304)
		Spinal Cord Organization	(418-431)
		Somatic Motor System	(371-373)
		Somatic Sensory System	(310-324)
#3	July 11	Autonomic Nervous System	(359-371)
		Skeletal Muscle Structure/Function	(378-398)
		Skeletal Muscle Biomechanics	(398-403)
#4	July 13	Smooth Muscle	(403-412)
		Endocrine/Receptor Basics	(166-191)
#5	July 18	MIDTERM #1 (Nerves through Smooth Muscle)	
		Control Theory	(13-18)
		Hypothalamus/Pituitary Axis	(197-220)
#6	July 20	Other Systems (Thyroid, Pancreas, etc.)	(708-719, 736-741)
		Blood Components	(512-524)
		Circulatory System	(436-450, 478-492)
#7	July 25	Cardiac Electrophysiology	(451-464)
		Electrocardiogram	
		Cardiac Mechanics	(464-471)
		Blood Pressure Control	(492-496)
#8	July 27	Body Fluids	(496-501)
		Transport Across Capillaries	
#9	August 1	MIDTERM #2 (Endocrine through Capillary Transport)	
		Renal System	(590-613)
#10	August 3	Fluid Volume Control	(619-641)
		Electrolyte Control	
		Diuretics	
	August 5 (Saturday)	FINAL (Everything) 11:30 a.m. - 2:30 a.m. Where - TBA	

BIPN 100
Human Physiology
6th edition reading list

LECTURE	TOPICS	READINGS (Silverthorn 6th ed.)
#1	Background	(1-25, 130-160)
	Neuron Structure/Function	(238-248)
	Membrane Potentials	(160-166, 248-254)
	Action Potentials	(254-266)
	Synaptic Transmission	(266-281, 391-393)
#2	Central Nervous System Organization	(289-319)
	Spinal Cord Organization	(442-458)
	Somatic Motor System	(391-393)
	Somatic Sensory System	(326-340)
#3	Autonomic Nervous System	(378-391)
	Skeletal Muscle Structure/Function	(399-420)
	Skeletal Muscle Biomechanics	(420-427)
#4	Smooth Muscle	(427-435)
	Endocrine/Receptor Basics	(175-201)
#5	Control Theory	(14-18)
	Hypothalamus/Pituitary Axis	(207-230)
#6	Other Systems (Thyroid, Pancreas, etc.)	(753-765, 782-787)
	Blood Components	(545-557)
	Circulatory System	(463-479, 509-524)
#7	Cardiac Electrophysiology	(479-493)
	Electrocardiogram	
	Cardiac Mechanics	(493-501)
	Blood Pressure Control	(524-528)
#8	Body Fluids	(528-533)
	Transport Across Capillaries	
#9	Renal System	(627-651)
#10	Fluid Volume Control	(658-681)
	Electrolyte Control	
	Diuretics	

BIPN 100
Human Physiology
5th edition reading list

LECTURE	TOPICS	READINGS (Silverthorn 5th ed.)
#1	Background	(1-16, 133-157)
	Neuron Structure/Function	(247-255)
	Membrane Potentials	(164-171, 255-259)
	Action Potentials	(259-273)
	Synaptic Transmission	(273-289, 396-401)
#2	Central Nervous System Organization	(297-326)
	Spinal Cord Organization	(447-462)
	Somatic Motor System	
	Somatic Sensory System	(342-348)
#3	Autonomic Nervous System	(386-396)
	Skeletal Muscle Structure/Function	(407-427)
	Skeletal Muscle Biomechanics	(427-432)
#4	Smooth Muscle	(432-439)
	Endocrine/Receptor Basics	(179-209)
#5	Control Theory	
	Hypothalamus/Pituitary Axis	(216-240)
#6	Other Systems (Pancreas, Thyroid, etc.)	(736-747, 764-768)
	Blood Components	(547-558)
	Circulatory System	(468-483, 513-526)
#7	Cardiac Electrophysiology	(483-496)
	Electrocardiogram	
	Cardiac Mechanics	(496-505)
	Blood Pressure Control	(532-540)
#8	Body Fluids	(526-532)
	Transport Across Capillaries	
#9	Renal System	(623-661)
#10	Fluid Volume Control	(661-672)
	Electrolyte Control	
	Diuretics	

BIPN 100
Human Physiology I

The best way to study for this class is to do the following:

1). Come to lecture and take notes.

2). **Copy your notes over**. While you do this, use the textbook (or some kind of reference) to help fill in the details or clarify the concepts. The best time to do this is the same day as the lecture.

3). **Make a list of questions** as you copy your notes. Bring the list with you to office hours and section so you can make sure to get answers to all of your questions.

4). Study before going to section.

5). First do the problem set questions without looking at the answers. This is the best way to practice problem solving and assess how well you know the material. Then check your answers against the answers that are provided. **Make a list of questions** about things that don't make sense or about how to do the problem solving.

6). The review sessions will be used to go over the practice exams (the answers are not posted). Do the practice exam questions before coming to the review sessions.

YOU ARE ALLOWED TO:

1). Bring an audio recorder to lecture/review sessions and use recordings for your own studying.

YOU ARE NOT ALLOWED TO:

1). Take pictures of the boards (you must take your own notes) or Powerpoints during the lectures or review sessions.
2). Take videos of the lectures or review sessions (remember that you should always ask someone before taking a video of them – and my answer will be "No").
3). Post class notes or audio recordings.
4). Post exams on the internet.