

### Schedule: Physiology/CTS 2008

<b>*Thurs, Jan 3</b>	8:10	8:20	PHYS/CTS	Lecture	Kutchai/Bloodgood	Introduction to Physiology/CTS course
	8:20	9:00	PHYS/CTS	Lecture	Hussaini	Autonomic nervous system: Introduction
	9:10	10:00	PHYS/CTS	Lecture	Hussaini	Autonomic nervous system: Transmitters & receptors
<b>Fri, Jan 4</b>	8:10	9:00	PHYS/CTS	Lecture	Hussaini	Autonomic nervous system: 2 <sup>nd</sup> messengers & signal transduction
	9:10	10:00	PHYS/CTS	Lecture	DeSimone	Histology of blood vessels
<b>Mon, Jan 7</b>	8:10	9:00	PHYS/CTS	Lab 10	CTS Staff	Lab on Histology of blood and blood vessels (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 10	CTS Staff	Lab on Histology of blood and blood vessels (Groups A,B,C,F)
<b>Tue, Jan 8</b>	8:10	9:00	PHYS/CTS	Lecture	Hussaini	Autonomic control of the cardiovascular system
<b>Wed, Jan 9</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Intro to cardiovascular system
	9:10	10:00	PHYS/CTS	Lecture	Duling	Cardiac muscle & its pumping functions
<b>Thurs, Jan 10</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Cardiac electrophysiology I – Cardiac ion channels
	9:10	10:00	PHYS/CTS	Lecture	Duling	Cardiac electrophysiology I – Cardiac ion channels
<b>Fri, Jan 11</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Hemodynamics I – Pressures & flows in the CV system
	9:10	10:00	PHYS/CTS	Lecture	Duling	Hemodynamics II – Blood & blood vessels
<b>Mon, Jan 14</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Cardiac function I
	9:10	10:00	PHYS/CTS	Lecture	Duling	Cardiac function li
<b>Tue, Jan 15</b>	8:10	9:00	PHYS/CTS	Lecture	Brady	The electrocardiogram – Viewing ion channels from outside the body
<b>Wed, Jan 16</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	The large vessels - Collapse & expansion of vessels
	9:10	10:00	PHYS/CTS	Lecture	Duling	Microcirculation I - Microvessels, physics, & control
<b>Thurs, Jan 17</b>	8:10	9:00	PHYS/CTS	Lecture	Brady	Electrocardiography
	9:10	10:00	PHYS/CTS	Lecture	Duling	Microcirculation II - Movement of water & salts from blood to tissue

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<b>Fri, Jan 18</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Control of peripheral vasculature I - Intrinsic & neural control of vessels
	9:10	10:00	PHYS/CTS	Lecture	Duling	Control of peripheral vasculature II - Paracrine signaling in the vessel wall
<b>Mon, Jan 21</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Coupling of the heart and great vessels
	9:10	10:00	PHYS/CTS	Lecture	Duling	Organ circulations I - Heart, muscle, skin
<b>Tue, Jan 22</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Organ circulations II - Brain & viscera
<b>Wed, Jan 23</b>	8:10	9:00	PHYS/CTS	Lecture	Hammill	Neonatal circulation
	9:10	10:00	PHYS/CTS	ClinC	Kramer	MRI – watching the heart in real time
<b>Thurs, Jan 24</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Integrated cardiovascular physiology - exercise
	9:10	10:00	PHYS/CTS	ClinC	McNamara	Atherosclerosis, diabetes, & hypertension
<b>Fri, Jan 25</b>	8:10	9:00	PHYS/CTS	Lecture	Fairchild	Temperature regulation
	9:10	10:00	PHYS/CTS	Clin C	Brady	Variations in cardiac rhythms
<b>Mon, Jan 28</b>	8:10	9:00	PHYS/CTS	Lecture	Duling	Integrative CV physiology - hemorrhage
	9:10	10:00	PHYS/CTS	Discussion	Duling, Brady	Review of cardiovascular physiology
<b>Tue, Jan 29</b>	8:10	9:00	PHYS/CTS	Lecture	Castle	Histology of the urinary tract
<b>Wed, Jan 30</b>	8:10	9:00	PHYS/CTS	Lab 11	CTS Staff	Laboratory: histology of the urinary tract (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 11	CTS Staff	Laboratory: histology of the urinary tract (Groups A,B,C,F)
<b>Thurs, Jan 31</b>	8:10	9:00	PHYS/CTS	Lecture	Rosner	Intro to renal physiology; Clearance methods
	9:10	10:00	PHYS/CTS	Lecture	Rosner	Clearance Methods
<b>Fri Feb 1</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Glomerular filtration
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Renal blood flow

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*“There is only one thing people like that is good for them: a good night’s sleep.” — Edgar Watson Howe*

*“The fellowship of those who hear the mark of pain. Who are the members of this fellowship? Those who have learned by experience what physical pain and bodily anguish mean, belong together all the world over; they are united by a secret bond. One and all, they know the horrors of suffering to which man can be exposed, and one and all they know the longing to be free from pain.” — Albert Schweitzer*

<b>Mon, Feb 4</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Tubular function
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Concentration and dilution of urine
<b>Tue, Feb 5</b>	8:10	9:00	PHYS/CTS	Lecture	Rosner	Body fluid compartments
<b>Wed, Feb 6</b>	8:10	9:00	PHYS/CTS	Lecture	Rosner	Control of body fluid osmolality and volume I
	9:10	10:00	PHYS/CTS	Lecture	Rosner	Control of body fluid osmolality and volume II
<b>Thurs, Feb 7</b>	8:10	9:00	PHYS/CTS	Lecture	Rosner	Renal regulation of potassium, calcium, phosphate, & magnesium I
	9:10	10:00	PHYS/CTS	Lecture	Rosner	Renal regulation of potassium, calcium, phosphate, & magnesium II
<b>Fri, Feb 8</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Renal regulation of acid-base balance
	9:10	10:00	PHYS/CTS	Discussion	Kutchai, Rosner	Review of renal physiology
<b>Mon, Feb 11</b>	<b>1:00</b>	<b>5:00</b>	<b>PHYS/CTS</b>	<b>Exam</b>	<b>Kutchai/Bloodgood</b>	<b>Exam 1: Autonomic, Cardiovascular, and Urinary Systems</b>

### **Sat, Feb 16 – Sun, Feb 24 Vacation Period**

<b>Mon, Feb 25</b>	8:10	9:00	PHYS/CTS	Lecture	Bloodgood	Histology of respiratory system
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Introduction to respiration
<b>Tue, Feb 26</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Gas diffusion and exchange
<b>Wed, Feb 27</b>	8:10	9:00	PHYS/CTS	Lab 12	CTS Staff	Lab on histology of the respiratory system Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 12	CTS Staff	Lab on histology of the respiratory system Groups A,B,C,F)
<b>Thu, Feb 28</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Pulmonary blood flow
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	O <sub>2</sub> -CO <sub>2</sub> transport

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*"The opinion of the majority is not the final proof of what is right." — Schiller*

<b>Fri, Feb 29</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	O <sub>2</sub> -CO <sub>2</sub> transport
*	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Ventilation-perfusion relationships I
<b>Mon, Mar 3</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Ventilation-perfusion relationships II
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Control of breathing I
<b>Tue, Mar 4</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Control of breathing II
<b>Wed, Mar 5</b>	8:10	9:00	PHYS/CTS	Lecture	Vinayak	Mechanics of breathing I
	9:10	10:00	PHYS/CTS	Lecture	Vinayak	Mechanics of breathing II
<b>Thu, Mar 6</b>	8:10	9:00	PHYS/CTS	Lecture	Vinayak	Mechanics of breathing III
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Respiratory control of acid-base balance
<b>Fri, Mar 7</b>	8:10	9:00	PHYS/CTS	Discussion	Kutchai	Review of respiratory physiology
*	9:10	10:00	PHYS/CTS	Discussion	Kutchai	Review of respiratory physiology
<b>Mon, Mar 10</b>	8:10	9:00	PHYS/CTS	Lecture	Castle	Histology of the digestive tract
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Intro to GI Physiology; Enteric nervous system
<b>Tue, Mar 11</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Enteric nervous system
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<b>Wed, Mar 12</b>	8:10	9:00	PHYS/CTS	Lab 13	CTS Staff	Laboratory: Histology of the digestive tract (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 13	CTS Staff	Laboratory: Histology of the digestive tract (Groups A,B,C,F)
<b>Thu, Mar 13</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	GI motility I
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	GI motility II
<b>Fri, Mar 14</b>	8:10	9:00	PHYS/CTS	Lecture	Keller	Histology of pancreas

*“When I hear somebody sigh that ‘life is hard,’ I am always tempted to ask, ‘Compared to what?’” — Sydney J. Harris*

*“We who lived in concentration camps can remember the men who walked through the huts comforting others, giving away their last piece of bread. They may have been few in number, but they offer sufficient proof that everything can be taken from a man but one thing: the last of human freedoms -- to choose one’s attitude in any given set of circumstances -- to choose one’s own way.” — Viktor Frankl*

*“To teach is to learn twice.” — Joseph Joubert*

	9:10	10:00	PHYS/CTS	Lecture	Keller	Histology and Physiology of liver
<b>Mon, Mar 17</b>	8:10	9:00	PHYS/CTS	Lab 14	CTS Staff	Laboratory: Histology of liver and pancreas (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 14	CTS Staff	Laboratory: Histology of liver and pancreas (Groups A,B,C,F)
<b>Tue, Mar 18</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	GI secretions I
<b>Wed, Mar 19</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	GI secretions II
	9:10	10:00	PHYS/CTS	Lecture	Kutchai	Digestion and absorption I
<b>Thu, Mar 20</b>	8:10	9:00	PHYS/CTS	Lecture	Kutchai	Digestion and absorption II
	9:10	10:00	PHYS/CTS	ClinC	Borowitz	Cystic Fibrosis
<b>Fri, Mar 21</b>	8:10	9:00	PHYS/CTS	Lecture	Day	Histology of endocrine glands
	9:10	10:00	PHYS/CTS	Lecture	Shupnik	Introduction to endocrinology & mechanisms of hormone action
<b>Mon, Mar 24</b>	8:10	9:00	PHYS/CTS	Lab 15	CTS Staff	Laboratory: Histology of endocrine glands (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 15	CTS Staff	Laboratory: Histology of endocrine glands (Groups A,B,C,F)
<b>Tue, Mar 25</b>	8:10	9:00	PHYS/CTS	Lecture	Silva	Pituitary hormones
<b>Wed, Mar 26</b>	8:10	9:00	PHYS/CTS	Lecture	Shupnik	Hormone resistance syndromes
	9:10	10:00	PHYS/CTS	Lecture	Silva	Neural control of pituitary; posterior pituitary and hypothalamus
<b>Thu, Mar 27</b>	8:10	9:00	PHYS/CTS	Lecture	Shupnik	Thyroid
	9:10	10:00	PHYS/CTS	ClinC	Thorner	Pituitary clinic
<b>Fri, Mar 28</b>	8:10	9:00	PHYS/CTS	Lecture	Dalkin	Adrenal hormones I
	9:10	10:00	PHYS/CTS	Lecture	Dalkin	Adrenal hormones II
<b>Mon, Mar 31</b>	8:10	9:00	PHYS/CTS	Lecture	Borowitz	Hormonal regulation of calcium and phosphate I
	9:10	10:00	PHYS/CTS	Lecture	Borowitz	Hormonal regulation of calcium and phosphate II
<b>Tue, Apr 1</b>	8:10	9:00	PHYS/CTS	Lecture	Barrett	Pancreatic islet hormones and actions of insulin and glucagons I
	9:10	10:00	PHYS/CTS	Lecture	Barrett	Pancreatic islet hormones and actions of insulin and glucagons II
<b>Wed, Apr 2</b>	8:10	9:00	PHYS/CTS	Lecture	Bloodgood	Histology of Male Reproductive System

	9:10	10:00	PHYS/CTS	Lecture	Moenter	Physiology of male reproduction
<b>Thu, Apr 3</b>	8:10	9:00	PHYS/CTS	Lab 16	CTS Staff	Laboratory: Histology of male reproductive system (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 16	CTS Staff	Laboratory: Histology of male reproductive system (Groups A,B,C,F)
<b>Fri, Apr 4</b>	8:10	9:00	PHYS/CTS	Lecture	Moyer	Histology of female reproductive system
	9:10	10:00	PHYS/CTS	Lecture	Moenter	Physiology of female reproduction I
<b>Mon, Apr 7</b>	8:10	9:00	PHYS/CTS	Lab 17	CTS Staff	Laboratory: Histology of female reproductive system (Groups D,E,G)
	9:10	10:00	PHYS/CTS	Lab 17	CTS Staff	Laboratory: Histology of female reproductive system (Groups A,B,C,F)
<b>Tue, Apr 8</b>	8:10	9:00	PHYS/CTS	Lecture	Moenter	Physiology of female reproduction II
<b>Wed, Apr 9</b>	8:10	9:00	PHYS/CTS	Lecture	Kirk	Pregnancy
<b>Thu, Apr 10</b>	9:10	10:00	PHYS/CTS	Review	Faculty	Review of Respiratory and GI systems
	10:10	11:00	PHYS/CTS	Review	Faculty	Review of endocrine system
<b>Fri, Apr 11</b>	8:00	12:00	No classes			Self-Study for Exam
<b>Mon, Apr 14</b>	1:00	5:00	PHYS/CTS	Exam	Kutchai/Bloodgood	<b>Exam 2: Respiratory, Digestive, and Endocrine Systems</b>

***Saturday, April 19 through Sunday, April 27 Vacation***

***Monday, Apr 28 Classes resume***