



## Human Physiology - BIOL 3070

The University of Toledo  
College of Natural Sciences and Mathematics

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<b>Instructor:</b>	Dr. Maria Diakonova	<b>Class Location:</b>	BO 1045
<b>Email:</b>	mdiakon@utnet.utoledo.edu	<b>Class Day/Time:</b>	Tuesday, Thursday 9:30 -10:45 AM
<b>Office Hours:</b>	by appointment	<b>Lab Location:</b>	N/A
<b>Office Location:</b>	BO 3096B	<b>Lab Day/Time:</b>	N/A
<b>Office Phone:</b>	530-7876	<b>Credit Hours:</b>	3
<b>Term:</b>	Spring 2017		

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### COURSE/CATALOG DESCRIPTION

Detailed structural and functional analysis of the human endocrine, nervous, reproductive, circulatory, respirator, immune, digestive and excretory system. An emphasis will be place on system-system interaction and homeostatic mechanisms.

### COURSE OVERVIEW

As a requirement for biology majors, this three credit hour lecture course covers topics relating to human physiology with a strong emphasis placed on homeostatic mechanisms and system-system interactions. The specific topics covered in this course include structural and functional analysis of the human endocrine, nervous, circulatory, respiratory, digestive and excretory systems. Students will be assessed with four exams given throughout the semester and an accumulative final exam at the end of the course.

### STUDENT LEARNING OUTCOMES

Upon completion of this course the student will be able to:

- 1) Become familiar with the fundamental concepts of human physiology.
- 2) Become acquainted with basic biology techniques and how they have provided us with important information in our understanding of human physiology.
- 3) Develop a deeper understanding of cell and tissue structures and how they relate to human physiology.
- 4) Understand cell signaling and how it regulates tissue and organ functions. Also how its disregulation leads to human diseases.



## **PREREQUISITES AND COREQUISITES**

Undergraduate level BIOL 3030 Minimum Grade of D-

## **REQUIRED TEXTS AND ANCILLARY MATERIALS**

This course will be lecture-based. There is no required textbook and lecture notes (as PDF and PowerPoint Presentations) can be downloaded from the Blackboard website. These lecture notes will be updated regularly, **but cannot substitute for class attendance**. Textbooks recommended (but not required): Sherwood: Human Physiology from Cells to Systems; and/or Derrickson: "Human Physiology", (Wiley, 1st ed., ISBN is 9781119296744. It includes the WileyPlus Learning Space resources, online text, adaptive learning, videos and 3D animations, and online homework, along with the physical book). Textbooks are used as reference material, all lectures and notes will be made available to the students via Blackboard.

## **TECHNOLOGY REQUIREMENTS**

Computer with Adobe Reader and Microsoft Power Point as well as access to Blackboard will be required in order to complete the course.



## **UNIVERSITY POLICIES**

*Policy Statement on Non--Discrimination on the basis of Disability (ADA) The University is an equal opportunity educational institution. Please read [The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.](#))*

### **Academic Accommodations**

*The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the [Student Disability Services Office.](#)*

## **ACADEMIC POLICIES**

### **STATEMENT ON ACADEMIC DISHONESTY**

#### **Department of Biological Sciences**

Academic dishonesty by students enrolled in undergraduate or graduate courses and programs offered by the Department of Biological Science will not be tolerated. Academic dishonesty includes, but is not limited to:

1. Obtaining assistance from another individual during an examination.
2. Giving assistance to another individual during an examination.
3. The unauthorized use of study material or textbooks during an examination.
4. Changing answers on an examination after it has been returned and then submitting it for re--grading.
5. Plagiarizing written assignments. Plagiarizing includes: (a) copying laboratory reports from previous years, (b) copying or paraphrasing reports, term papers, or theses prepared by other students, (c) unauthorized collaboration in the preparation of reports, term papers, or theses, and (d) use of another author's materials without appropriate acknowledgment through quotation and citation.
6. Attempting to bribe or otherwise induce an instructor to alter either a grade or examination score.



7. Obtaining or attempting to obtain a copy of an examination prior to its administration.

In accordance with policy outlined in the Student Handbook and the University Catalog, instructors have the responsibility and right to bring cases of alleged dishonesty to departmental, college, and university administrative units. Students involved in academic dishonesty may expect to receive a grade of F on specific assignments as well as in the course where the assignment was made. In addition, disciplinary action may be recommended through appropriate college and university disciplinary committees.

## **STUDENT EVALUATION**

Examinations will consist of four 75-min tests worth 100 points each and one final 2-hour test and will only cover material discussed in class. For this reason, class attendance is critical. *The grade will consist of 20% from each of the four in-class examinations and 20% from the final examination.*

### Basic Examination Rules:

1. All examinations must be taken at the scheduled time. There will be a 5% penalty on make-up exams. Make-up exams have no extra credit points.
2. Examinations will start and end at the specified times. Students arriving more than 10 minutes after the examination has begun will not be admitted under any circumstances.
3. Be sure to bring at least two number 2 (#2) pencils and your valid UT student ID card to each examination.
4. QUIET is to be maintained AT ALL TIMES while an examination is being taken! Please be considerate of your fellow students. Violators of this rule will have their examinations confiscated and they will receive a grade of F for the examination.
5. If you feel that an error in grading your examination has occurred, you must respond within ONE WEEK of receiving the examination back from me. Otherwise, I will assume that there is no problem and the grade will be recorded as it stands.



## **Grades and Withdraws**

I do not assign grades of DR (drop). You may withdraw from this course if you want to but to do this you must fill out a withdrawal slip and process it through official University channels by the posted deadline.

Grades will be determined based upon student class tests. Grades will be letter-based and will utilize a straight scale (see below).

A = 93-100%	B- = 80-82%
A- = 90-92%	C+ = 77-79%
B+ = 87-89%	C = 73-76%
B = 83-86%	C- = 70-72%
	D+ = 67-69%
	D = 63-66%
	D- = 60-62%

## **COMMUNICATION GUIDELINES**

Instructor is available by appointment, or can answer Email questions.

## **STUDENT SUPPORT SERVICES**

The University of Toledo offers a wide range of academic and student support services that can help you succeed:

### **University Libraries**

University Libraries are your gateway to information at the University of Toledo connecting you with the resources you need for education, and research.

### **Tutoring Services**

Tutoring support for all UT students is available through the Learning Enhancement Center located in the Carlson Library. Tutoring Services are offered in an array of subjects, including Writing, Math (Calculus), Statistics, Accounting), Biology, Chemistry and Anatomy and Physiology



## The Writing Center

The Writing Center provides free, face-to-face and online tutoring for writers in all disciplines. The staff there can assist you with a variety of writing assignments.

## The Counseling Center

Transitioning to college and/or maintaining a healthy well being while attending college can be difficult, if you or a friend ever feel overwhelmed adjusting to college or in need of crisis intervention or mental health services please contact the Counseling Center.

## Topics Covered for BIOL 3070 (Spring 2017)

Below is a general outline of the topics that will be covered on the given dates. Please note that the topics and/or dates are subject to change and notice will be given via Blackboard to such changes.

<b>Date:</b>	<b>Topic(s):</b>	<b>Chapter: (Sherwood)</b>	<b>(Derrickson)</b>
1/10	1 – Introduction to Physiology, Homeostasis	1	1
1/12	2 –Cell Physiology	2	3-4
1/17	3 – Plasma Membrane and Signal Transduction	3-4	5-6
1/19	4 – Principles of Neural Communication	3-4	7
1/24	5 - The <b>Central Nervous System</b>	5	8
1/26	6 - <b>PNS</b> , Afferent division, eye	6	9
1/31	7 - <b>PNS</b> , Afferent division. Ear. Taste. Efferent Division	6-7	9-10
<b>2/2</b>	<b>Exam I</b>		
2/7	8 – <b>Immune system</b> I	12	17
2/9	9 – Immune system II	12	17
2/14	10 – <b>Reproductive System</b> I	20	23
2/16	11 – Reproductive System II	20	23
<b>2/21</b>	<b>Exam II</b>		
2/23	12 – <b>Endocrine system:</b> Central Endocrine system	18	13
2/28	13 - Peripheral Endocrine system	19	13
3/2	14 - <b>Circulatory system:</b> Heart, Anatomy and Excitation	9	14



**3/7 and 3/9 No Class- Spring Break**

3/14	15 - Blood Vessels	10	15
3/16	16 – Blood pressure and Blood	11	16
3/22	17 – <b>Respiratory system</b>	13	18

**3/23 Exam III**

3/28	18 – <b>Muscular system I</b>	8	11
3/30	19 – Muscular system II	8	11
4/4	20 – <b>Urinary system:</b> Kidney, Anatomy and Function	14	19
4/6	21 - Formation of Urine	14	19
4/11	22- Regulation of Fluids, pH	15	20

**4/13 Exam IV**

4/18	23 – <b>Digestive system:</b> GI tract, stomach	16	21
4/20	24 – Liver, pancreas	16	21
4/25	25 – Small and Large Intestines	16	21
4/27	26 - Energy and Temperature Regulation	17	22

**Final Exam: Wednesday, May 3ed, from 8:00-10:00 AM.**