

Course Prefix/Number/Title: BIOL 115 – Human Structure and Function

Number of Credits: 4 semester credits

Course Description:

An introduction to the study of the structure (anatomy) and function (physiology) of the human body. This course consists of three one-hour lectures and one two-hour lab each week.

Pre-/Co-requisites: None

Course Objectives:

The goal of this course is to facilitate student learning about human anatomy and physiology so that students better understand and appreciate the complexities of and interactions between organ systems in order to promote the advancement of life sciences in society.

Objectives:

- 1) To learn and retain information essential to a broad knowledge of human anatomy and physiology.
- 2) To understand and utilize scientific methods of inquiry.
- 3) To practice sound, safe, and sensible laboratory techniques.
- 4) To appreciate the historic development of science.
- 5) To apply scientific information and principles to everyday life.
- 6) To recognize the interrelationship among the sciences, technology, and society.

Instructor: Larry Brooks

Office: NSC 111

Office Hours: 9-10 am M, W, & F and by appointment

Phone: 228-5457

Email: larry.brooks@dakotacollege.edu

Lecture Schedule: 2:20 - 3:10 PM MWF in TH 2211

Lab Schedule: 3:00 - 4:50 PM on Thursday in NSC 128 or by arrangement

Textbooks: Understanding Human Anatomy and Physiology, S. Longenbaker, 6th Edition
Human Biology Laboratory Manual 10th Edition by Sylvia Mader

Course Requirements:

Although subject to slight modification based on the discretion of the instructor, the lecture component of this course will consist of approximately 600 points (12 drop quizzes worth 10 points each, 4 lecture exams worth 100 points each, and one final exam worth 100 points). The

laboratory component of this course consists of 200 points (14 lab reports @ 10 points each and four lab exams @ 15 points each. Lecture points are added to laboratory points to obtain the total points possible for the course (approximately 800). (Note: Regardless of the number of points, lecture points will comprise 75% of the total points and lab points will comprise 25% of the total points.) Drop quizzes may not be made up, but students will be able to drop their two lowest scores of the twelve drop quizzes given during the semester. There is a one week grace period to make-up any missed exam or assignment. Any missed exam/work not made up within the allotted time will be given a zero. Makeup exams may be of an essay nature and are usually considered more difficult. Grading is based on a standard college curve, where students earn a grade based upon the percent of total possible points they obtain. Final letter grades are assigned based on the following criteria:

- A = 89.5-100% of the total points
- B = 79.5 - <89.5% of the total points
- C = 69.5 - <79.5% of the total points
- D = 59.5 - <69.5% of the total points
- F = <59.5% of the total points

Course Outline (Tentative):

LECTURE

<u>DATE</u>	<u>TOPIC</u>	<u>READING</u>
8-27	Introduction	
8-29	Organization of the Body	Chpt. 1
9-1	NO CLASS - LABOR DAY HOLIDAY	
9-3	Chemistry	Chpt. 2
9-5	Chemistry	Chpt. 2
9-8	Chemistry	Chpt. 2
9-10	Chemistry	Chpt. 3
9-12	Cell Structure	Chpt. 3
9-15	Cell Function	Chpt. 3
9-17	EXAM I	
9-19	Tissues	Chpt. 4
9-22	Tissues	Chpt. 4
9-24	Integumentary System	Chpt. 5
9-26	Skeletal System	Chpt. 6
9-29	Skeletal System	Chpt. 6
10-1	Muscular System	Chpt. 7
10-3	Muscular System	Chpt. 7
10-6	Muscular System	Chpt. 7
10-8	EXAM II	
10-10	Nervous System	Chpt. 8
10-13	Nervous System	Chpt. 8
10-15	Nervous System	Chpt. 8
10-17	Sensory System	Chpt. 9
10-20	Sensory System	Chpt. 9

10-22	Endocrine System	Chpt. 10
10-24	Endocrine System	Chpt. 10
10-27	Blood	Chpt. 11
10-29	Blood	Chpt. 11
10-31	EXAM III	
11-3	Circulatory System	Chpt. 12
11-5	Circulatory System	Chpt. 12
11-7	Lymphatic System	Chpt. 13
11-10	Lymphatic System	Chpt. 13
11-12	Respiratory System	Chpt. 14
11-14	Digestive System	Chpt. 15
11-17	Digestive System	Chpt. 15
11-19	Nutrition	Chpt. 15
11-21	EXAM IV	
11-24	Urinary System	Chpt. 16
11-26	Urinary System	Chpt. 16
11-28	NO CLASS - THANKSGIVING	
12-1	Reproductive System - Male	Chpt. 17
12-3	Reproductive System - Female	Chpt. 17
12-5	Development and Birth	Chpt. 18
12-8	Development and Birth	Chpt. 18
12-10	Genetics	Chpt. 19
12-12	Genetics	Chpt. 19
12-15	FINAL EXAM (2:20-4:30 PM)	

LAB

<u>DATE</u>	<u>TOPIC</u>	<u>LAB #</u>
9-2	Use of the Light Microscope	2
9-7	Basic Mammalian Anatomy	6
9-16	Cell Structure and Function	4
9-23	Human Body Tissues	3
9-30	LAB EXAM I over Labs 2-4 & 6;	
	Skeletal System	13
10-7	Muscular System	13
10-14	Nervous System	14
10-21	LAB EXAM II over Labs 13 & 14	
	Senses	14
10-28	NO LAB - ASSESSMENT DAY	
11-4	Cardiovascular System	7
11-11	Circulatory and Respiratory Systems	8
11-18	LAB EXAM III over Labs 7, 8, & 14;	
	Digestive System	9
11-25	Urinary System	12
12-2	Reproductive Systems	11
12-9	Development, Inheritance and Genetics	15 & 17
12-16	FINAL LAB EXAM over Labs 9, 11, 12, 15 & 17	

General Education Goals and Objectives

This course meets General Education Goal 1: Explains the interrelationships between humans and their environment and the role of science in their lives. Specific objectives include:

- 1) Demonstrates the application of the scientific method of inquiry (Objective #1).
- 2) Demonstrates an awareness of the role of science in everyday life (Objective #3)

Relationship to Campus Theme:

This course addresses the campus theme by incorporating the latest diagnostic procedures, treatments, and other technologies that are used to identify and treat human diseases and disorders.

Classroom Policies

- 1) Cell phone and related technology are prohibited in the classroom at all times. It is recommended that you do not bring your cell phone into the classroom or, at the very least, turn it off.
- 2) Food and beverages are permitted in accordance with IVN classroom policy.
- 3) Be respectful of other students, technicians, instructors, and guests.

Academic Integrity

All students are expected to adhere to the highest standards of academic integrity. Dishonesty in the classroom or laboratory and with assignments, quizzes and exams is a serious offense and is subject to disciplinary action by the instructor and college administration. For more information, refer to the Student Handbook.

Disabilities and Special Needs

If you have a disability for which you need accommodations, you are encouraged to contact your instructor and the Learning Center (228-5479 or 1-888-918-5623) to request disability support services as early as possible during the beginning of the semester.