

NSG 313: Anatomy and Physiology II and Application to Health

Pre-Requisite(s)

Anatomy and Physiology I or permission of instructor.

Co-Requisite(s)

None.

Credit Hours

3 Credits

Course Format

Complete Online Course

Meeting Days, Times, and Locations

Fully online. No required in-class session.

Course Description

This online course focuses on human structure and function for those students pursuing careers in nursing and other allied health fields. Structural information is combined with important functional concepts to provide an integrated understanding of the dynamic human body. Specific body systems covered in depth include the cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Nutrition and metabolism, immunity, as well as fluid, electrolyte, acid-base balance, and genetics are additional physiological areas of study. The complementary structure and function of the healthy body is highlighted as systems of the body work to maintain a constant homeostatic environment. Clinical examples are provided to help the student understand disease process as a disruption of normal structure and function. This course will also focus on the concepts of health promotion and risk reduction of major topics and conditions related to the particular body systems. These topics are introduced to bridge anatomical and physiological content to nursing and health care based on national health promotion priorities.

NOTE: This course does NOT include a lab component.

Student Learning Outcomes

At the conclusion of this course, the student will achieve the following identified outcomes.

1. Correlate microscopic and macroscopic anatomy with associated physiologic processes for each of the identified body systems.
2. Compare and contrast types of immunity and the functions of B and T cells.
3. Describe nutrient metabolism, the concept of metabolic rate, and physiological mechanisms that regulate body temperature.
4. Discuss the types of body fluids within the various body compartments and the mechanisms that maintain fluid balance in the body.
5. Contrast the respiratory and urinary mechanisms of pH control demonstrating comprehension of metabolic and respiratory imbalances and concepts of pH, acids and bases.
6. Apply concepts of health promotion and risk reduction for identified conditions related to each body system.

Teaching Methods/Activities

This course uses a combination of methods to facilitate learning/mastery of content:

- Online lectures
- Selected web and literature searches
- Online activities

- Readings from Cohen, B.J., & Taylor, J. (2016). *Memmler's structure and function of the human body* (11th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Video streaming
- Mini-Case studies
- Practice questions
- Online Testing
- Student Learning Activities provided by the publisher of *Memmler's structure and function of the human body* (11th ed.). Philadelphia, PA: Lippincott Williams & Wilkins/Wolters Kluwer. (You will receive an access code with the purchase of a NEW textbook)

Online Activities and Expectations

1. Budget your time wisely! Typically you will spend 9 hours per session on class activities for this online class. For a 3 credit class you are expected to:

- respond to the initial discussion board
- review the online lecture notes
- complete all assigned readings in the required text
- access and review online web resources
- complete all activities as directed
- submit the online test for each session

2. Online sessions will include lecture notes (supplemented with your readings in the required text), web resources, activities, and a test to be completed for each session.

3. It is strongly suggested you complete the questions at the end of each chapter. Answers to the questions can be found in the back of your textbook. Although these exercises will not be submitted or graded, they will help you evaluate your understanding of the information in the session.

4. Online tests, although taken at your geographical and time convenience, should be treated as a classroom based examination experience. This means you should study prior to taking the examination and refrain from using study and lecture material during the test. To prepare for the test you are encouraged to use the study outline found at the end of each chapter, review lecture and reading material, and complete all activities.

5. All online tests are multiple-choice and must be submitted prior to the end of the course. One minute per question is the general guideline. Please NOTE: The online tests are timed according to the number of questions. The time limit will be clearly posted before you begin the test. Therefore if 25 minutes is posted for a given test, you will have 25 questions to complete the test. You can access the test only once. Therefore, once you start the test you must finish it! Academic honesty requires you not share test information with others.

6. Questions about the course or content should be emailed to the course facilitator, Marialaina Chennell, marialaina_chennell@urmc.rochester.edu.

Evaluation Methods/Learning Outcomes

Course Requirement	Percent of Total Grade	Alignment with Student Learning Outcome(s)
1. Online tests	100%	SLO 1, 2, 3, 4, 5, & 6

The final grade entered is based on School of Nursing grading system. See *Student Handbook page 22* (<https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf>)

Online tests are 100% of final grade. Each exam has equal weight. There are a total of 10 exams each worth 10% of the final grade.

Grading System (for Undergraduate Programs)

The student's final numerical grade will be converted to a letter grade based on the following University of Rochester undergraduate student grading criteria:

A	93-100	C	73-76	"C-" is considered unsatisfactory work for undergraduate students; see <i>Student Handbook</i> for implications.
A-	90-92	C-	70-72	
B+	87-89	D+	67-69	Failing grade; see <i>Student Handbook</i> for implications.
B	83-86	D	63-66	
B-	80-82	D-	60-62	
C+	77-79	E	<60	

Required Textbook(s)

Cohen, B.J., & Hull, K.L. (2016). *Memmler's structure and function of the human body* (11th ed.). Philadelphia, PA: Wolters Kluwer.

(Permission has been granted from Lippincott to use instructor available materials and images in this online course per agreement for the above textbook for this course.)

PLEASE NOTE: The Memmler textbook is required for class activities, readings and to supplement the online lectures. The book can be purchased through the bookstore.

Recommended Textbook(s)

Cohen, B.J. & Hull, K.L. (2016). *Study guide for Memmler's structure and function of the human body* (11th ed.). Philadelphia, PA: Wolters Kluwer.

Course Outline

Session One: Cardiovascular System: The Blood

Session Two: Cardiovascular System: The Heart

Session Three: Cardiovascular System: Blood Vessels and Blood Circulation

Session Four: Lymphatic System and Body Defenses

Session Five: Respiratory System

Session Six: Digestive System

Session Seven: Metabolism, Nutrition, and Body Temperature

Session Eight: The Urinary System

Session Nine: Male & Female Reproductive System

Session Ten: Development & Heredity

ADA Statement and Holidays

See *Student Handbook* (<https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf>)

Academic Honesty Statement

Students are responsible for their own work. Students are expected to have read and to practice principles of academic honesty. See *Student Handbook* (<https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf>)
Student attestation is completed on Blackboard for each course.

Professional Behavior/Civility Statement

The University of Rochester, School of Nursing (SON) seeks to provide an environment for learning and teaching that is respectful of diverse persons and points of view in all classroom, electronic, and clinical settings. Consistent with this goal, it is expected that diverse perspectives and opinions will be expressed and received in a respectful and professional manner. Incivility, intolerance, hate speech, and abusive behaviors are considered professional misconduct and will be acted upon in accordance with the statement in the *Student Handbook*. (<https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf>)

Sexual Harassment Policy

Students are to abide by the University of Rochester Student Sexual Misconduct Policy which can be found in the *Student Handbook* (<https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf>). Faculty review policy in all face-to-face classes.

HIPAA Compliance

Students are to abide by the University of Rochester HIPAA Compliance Guidelines which can be found on the SON website (<http://son.rochester.edu/r/HIPAA-Video>).