

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. Open to nonmatriculated students.

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., & Hull, K. L. (2020). *Memmler's structure and function of the human body* (12th ed.). Jones & Bartlett Learning, LLC.

- 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* (12th ed.). (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:

- 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.

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.

This course is entirely online, so the only way course faculty have to contact you is through the email you used to sign up for this course. You should be checking your email at least 3-4 times per week in case course faculty are trying to contact you. This is extremely important. Please feel free to contact course faculty with any questions.

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	
B	83-86	D	63-66	
B-	80-82	D-	60-62	Failing grade; see <i>Student Handbook</i> for implications.
C+	77-79	E	<60	

The Center for Lifelong Learning wants to make sure you have the time you need to do your best work in this course. It is your responsibility to reach out to course faculty to ask for more time if you need it, and to sign the contract that is sent to you and return it before the end of the semester. Failure to do so will result in zero points posted for any outstanding work and a final grade being calculated and posted.

Required Textbook(s)

Cohen, B. J., & Hull, K. L. (2020). *Memmler's structure and function of the human body* (12th ed.). Jones & Bartlett Learning, LLC.

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

PLEASE NOTE: The Memmler's 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. (2020). *Study guide for Memmler's structure and function of the human body* (12th ed.). Jones & Bartlett Learning, LLC.

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: The Lymphatic System and Immunity

Session Five: The Respiratory System

Session Six: The Digestive System

Session Seven: Metabolism, Nutrition, and Body Temperature

Session Eight: The Urinary System and Body Fluids

Session Nine: The Male & Female Reproductive Systems

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>)

TITLE IX/Sexual Harassment Policy

All members of the University community have the right to learn and work in a safe environment free from all forms of harassment, including harassment on the basis of sex or gender. Students who have been subjected to sexual harassment, including sexual assault, dating/domestic violence or stalking, have the right to receive academic, housing, transportation or other accommodations, to receive counseling and health services and to make a report about such behavior to the University and to law enforcement. For more information please visit www.rochester.edu/sexualmisconduct.

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>).