



BIOL 235 Pathophysiology Spring 2022

Title: Pathophysiology	Course number: BIOL 235
Credit hours: 3	Contact hours: 45
Schedule: Asynchronous, lectures recorded	Instructor: Paul Rudenberg
E-mail: prudenberg@smccme.edu	Phone: (207)-318-7937 (text, urgent only)
Zoom Office hours: By appointment, and Thursdays at 9 am	

Syllabus and Schedule

Course Description

BIOL 235 Pathophysiology 3 credits. This course is designed to provide the student with an introduction to the study of disease, both congenital and acquired. Emphasis is placed on the alteration of normal physiology in the presence of disease processes to include signs and symptoms as well as physical consequences and laboratory findings.

Prerequisites: BIOL-138

Textbooks and resources:

Required textbook: Gould's Pathophysiology for Health Professionals, 6th edition, by Robert J. Hubert and Karin C. VanMeter ISBN 13 978-0-323-41442-5

The study guide offered at the bookstore is not required

Access to a computer and a reliable Internet connection are also required for this course.

Course Objectives:

After successfully completing this course, you should be able to:

1. describe the scientific method of inquiry.
2. identify important concepts related to human disease.
3. define anatomical and medical vocabulary as it relates to pathophysiology.
4. distinguish and characterize the pathophysiology of major organ systems, including some diagnostic tests for same.
5. identify and describe various mechanisms and effects of physical disease, in adults and children.
6. state the effects of normal aging on body systems.

Learning outcome for SMCC science courses: SMCC students recognize the methodology and content of science and its relevance. SMCC students: - apply scientific methodology to the study of the natural world. -

participate in hands-on and interactive lab activities - demonstrate the ability to make scientifically-informed decisions.

Course Requirements

There are two or three recorded lectures each week available on Brightspace under weekly “Modules” . The slides presented in these lectures, and notes used are also available in the same module. Other learning materials, list of assignments, biweekly study questions assignments, and biweekly quizzes are available on Brightspace.

Reading and re-reading the assigned text chapters , following the recorded lectures, participating in discussions are important aspects of the course. Comprehension is evaluated via study assignments, quizzes, and four exams.

Student Evaluation and Grading

<u>Graded work:</u>	<u>% of grade:</u>
a. Exams (3, each worth 14%)	42%
b. Online Quizzes	12%
c. Study assignments on readings	12%
d. Oral Presentation	10%
e. Discussions	10%
f. Final Exam	14%

There are three equally weighted **exams** given during the semester over the material in the textbook and in the lectures . The first three exams will be primarily on the material discussed in lectures and readings during the most recent 4-5 weeks of the course, and in assigned chapters from your textbook. The last exam is a Final Exam that will cover important topics (list provided) from throughout the semester. Most exams have both a closed book and an open book/note component. Majority of the open book questions are short answer and many come from the quizzes and study assignments, but there will also be some short essays or diagrams. Each exam accounts for 14% of your semester grade. Thus, exams, including the final (14%), will together account for 56% of your grade. One or two of the exams (closed book section only) including the final, will be proctored online.

Most weeks there will be either an online quiz or a written “study assignment”, taken from your readings. These assignments are all due one week after they are assigned. They will require knowledge of the reading material assigned and must be written in your own words. The study assignments are submitted on Brightspace, (in Word, PDF, or Open Office, not in “Pages”) by the due date. Together the study assignments and quizzes account for 24% of your grade. All assignments, with due dates, will be posted on the brightspace calendar.

Oral Presentation You will prepare a referenced, recorded or live, oral presentation with slides - The subject will be the pathophysiology of a particular disease or disorder of your choice, usually related to your envisioned profession. A list of subjects and more details will be posted in week 3 on Brightspace. Date for various submissions related to this presentation are on the course calendar and on Brightspace.

Discussions - Online discussions will count for 10% of your final grade. Offer well thought out comments (2 - 3 per week) of 2- 3 complete sentences related to the subject being discussed, and based on your reading. Optional, live discussions on zoom will be held occasionally.

Letter grades are assigned following the policy in the SMCC handbook:

100-93 = A	86-83 = B	76-73 = C	66-63 = D
92-90 = A-	82-80 = B-	72-70 = C-	62-0 = F
89-87 = B+	79-77 = C+	69-67 = D+	

Scores for your exams, and quizzes can be found on Brightspace. Also on Brightspace, starting after the first exam, you will find a rough calculation of your semester grade which is based on all of your work up to that point. It will be more accurate as the semester goes on. Contact me if you have any questions or wish to discuss grading of an assignment. Also contact me by email if you think the online quiz grading is not correct.

Midterm Grades

A midterm grade will be calculated for each student and submitted to the registrar during the 10th week of the semester (before the end of the withdrawal period). This grade will provide a notification of student performance during the first half of the semester, but will not appear on the student transcript.

Policy on due dates

Completion of exams and quizzes by their due date and participation in online written discussions are also required.

Late assignments will be penalized at 10% the first day, then 5% of the total grade per day. Exams must be submitted on time.

If you do not submit 3 assignments without notification of your instructor, you will be reported to administration as no longer attending the class discussions (AF grade).

How To Contact Your Professor

The best way to contact your instructor is by sending an e-mail. I will respond promptly and I encourage you to contact me about any issues. You must also be available by email. I also expect students to read all course-wide emails, and respond when requested. My campus e-mail is prudenberg@smccme.edu. If you have any problems with Brightspace, please email me immediately. Text for urgent messages such as problems during an exam. For recommendation requests, etc. after the end of the semester, cc your email to drpaulmaine@gmail.com .

You can always talk with me by Zoom on Thursdays at 9 am, or at another time we arrange.

Course Evaluation

It is important that you fill in the online course evaluation. Also, if you have a question or a suggestion about the course format in general or regarding an exam question in particular, please feel free to contact me directly or write a note. I do like to hear how the course could be improved.

Success

It is a challenging three credit course that requires self-discipline on keeping up with reading, and good study habits. You must have adequate time to devote to the course, especially reading and attending discussion. There is a lot of reading involved and much graded work . You are responsible for topics in assigned book chapters, whether or not they are discussed in the lectures. Constructive participation, in discussion is encouraged.

Method of study

The emphasis of the course will be on underlying alterations of physiology due to disease, disease etiology, and to a limited extent, signs and symptoms of diseases and disorders. There will be much less on therapy or preventive measures.

Read the assigned textbook chapters more than once. Take notes from the book. Study the summary at the end of the chapter and the outline at the beginning. Review the lecture slides and notes that are on Brightspace each week. Ask the instructor questions by email or via zoom For *a section* of most exams, you will be able to use your book and notes – so have these available.

Course Schedule (any changes will be posted on Brightspace)

Note - online discussions are biweekly, beginning with week 2

Week 1 starts: January. 16

Introduction to Pathophysiology, and
Electrolyte, Fluid and Acid-Base Balance/Imbalance
Required Readings Gould's Chapters 1 and 2 Online quiz

Week 2 January 23

Inflammation and Healing, Immune System
Required Reading Gould's Chapters 5 and 7 Study questions assignment
Jan 25 5 pm Add/drop ends

Week 3 January 30

the Immune System, continued, and Infections
Required Reading: Gould's Chapter 6 Online quiz
Thursday Feb 3 **Submit topic** for your oral presentation

Week 4 Feb 6

Neoplasia
Required Reading Gould's Chapter 20 Study questions assignment
Exam 1 Chapters 1, 2, 5, 6 and 7

Week 5 Feb 13

Disorders of the Skin
Required Reading: Gould's Chapter 8 Online quiz
Friday, Feb. 18 - **Submit 3 references** for your oral presentation

Week 6 Feb 20

Musculoskeletal System
Required Reading: Gould's Chapter 9 Study questions assignment

Week 7 Feb 27

Blood and Circulatory system Lymphatic system
Required Reading: Gould's, Chapter 10 and 11 Online quiz
Thursday, March 3 **Submit one page outline** of your presentation

Week 8 March 13
Cardiovascular System Disorders
Required Reading: Gould's, Chapter 12 Study questions assignment
Exam 2 Chapters 20, 8, 9, 10, and 11

Week 9 March 20
Respiratory System Disorders
Required Reading: Gould's Chapter 13 Online quiz

Week 10 March 27
Respiratory System (continued)
Nervous System Disorders
Required Reading: Gould's Chapter 13 and 14 Study questions assignment
Thursday, April 1 **Submit a draft** recording of your presentation

Week 11 April 3
Nervous System (Continued)
Selected Disorders of the Ear and Eye
Required Reading: Gould's Chapter 14 and 15 Online quiz

Week 12 April 10
Endocrine System Disorders
Digestive System Disorders
Required Reading: Gould's, Chapter 16 and 17 Study questions assignment
Exam 3 Chapters 12 through 16

Week 13 April 17
Digestive System Disorders
Required Reading: Gould's, Chapter 17 Online quiz
Thursday, April 21 **Final oral presentation to be recorded/submitted**
Tuesday, April 19 – Last day to withdraw from classes

Week 14 April 24
Urinary System Disorders and Catch-up day
Required Reading: Gould's Chapter 18 Study questions assignment

Week 15 May 1
Reproductive System Disorders
Required Reading: Gould's Chapter 19 Online quiz

Week 16 May 8
Tuesday – Optional Review on Zoom (also recorded)– bring your questions
Thursday, May 12 Final exam (proctored online)
Closed and open book Chapters 17, 18, 19, 23 and previous readings

Policies for all courses at Southern Maine Community College:

End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 p.m. Following the last day of the class. You will receive an e-mail to your student e-mail account when course evaluations are available.

ADA Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call (207) 741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

The Learning Commons and SMCC Library

The library, tutoring and writing centers, and reference/research assistance (typically located on the second floor of South Portland's Campus Center and in the Midcoast's LL Bean Learning Commons and Health Science Center) will be **fully available online during the Spring 2022 semester**. Here you can find free academic support through individually scheduled and drop in, online tutoring. You can also find information literacy/research librarians, and professional academic strategy/planning mentoring online. While the physical space of the Learning Commons will not be available at this time, we can also work with you to set up zoom classrooms for small group study. Services are offered by appointment or as drop-in assistance.

To access services: Visit My Learning in My Maine Guide or Select the "tutoring needed" button if it appears inside your Brightspace course. Whether On Site or Online, students have consistently reported that the Learning Commons is a friendly, risk-free, and helpful place to seek academic support. It has also been shown that those who make use of the Learning Commons do better in a course than those who do not. We strongly encourage you to take advantage of this valuable and enjoyable resource.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the Fall and Spring semesters and the second through ninth week of twelve-week Summer courses. This period is pro-rated for shorter-length courses, usually 75 percent of course meeting times; please check with the Registration Office. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Registration Office. This process must be completed either in person or by using SMCC e-mail accounts.

Plagiarism Statement

If an instructor suspects that a student has knowingly committed a violation defined in the Maine Community College System Policy on Student Grade Appeals and Academic Misconduct, the instructor has the authority to review the alleged misconduct and determine the grade that the student should receive for the assignment and the course. The instructor may assign a failing grade for the assignment or course and may require the student to complete additional work for the course. The instructor may consult with the department chair and/or the College's chief academic officer prior to making such decisions. If a student seeks to challenge an instructor's determination, the student should submit a grade appeal. Grade appeal forms are available in the Advising Office on the South Portland Campus or in the administrative offices in the Learning Commons on the Midcoast Campus. An instructor may also refer the matter to the College's disciplinary officer for review under the procedures of the MCCS Student Code of Conduct