

Title: Pathophysiology

Credit Hours: 3

Lecture: Online

Office Hours: location-online

Catalog Number: BIOL235-D2

Instructor: Lisa Legere

Instructor Contact: [llegere@smccme.edu](mailto:llegere@smccme.edu)

or use the email button in the course

### **Course Description :**

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 systems as well as physical consequences and laboratory findings. Prerequisite(s): BIOL 135 and BIOL 136, OR BIOL 138. Corequisite(s): none

### **Required Materials:**

#### **Textbook:**

*Gould's Pathophysiology for Health Professions*, 6th ed., by Robert J. Hubert and Karin C. VanMeter, Elsevier. ISBN 9780323414425 (textbook) OR 9780323414340 (ebook)

#### **Online Student Resources**

There are many online student resources with this textbook. You will need to register your textbook to access these resources. More information can be found in the beginning of the textbook on how to access these resources. We will be utilizing the animations as both an instructional tool, as well as an assignment.

### **Course Format:**

This is a fully online course through Brightspace. Our section is 100% online and does not have any scheduled live or zoom sessions. We do however have work due each week with firm due dates. You must have constant, reliable access to a properly configured, up-to-date computer with a dependable Internet connection, either an SMCC computer or your own desktop computer or laptop. This is a requirement for the course. **Electronic devices do not support Brightspace testing and other features.**

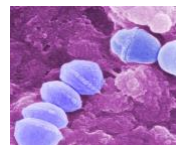
Active participation is expected and enhances your ability to integrate the material and achieve success in the course. Online courses require a high degree of planning, time management, and effort on your part. There will be a variety of course instructional materials included in the course. You are expected to read the chapter(s) and review these materials before you participate in discussion boards, and complete other graded work in the course. These materials will assist you with learning the material in our course. Since we are fully online with no live meetings, these instructional materials are the lecture (instructional) part of the class.

I will actively facilitate your integration of materials and provide appropriate communication, class activities, assignments, study techniques, assessment, and group and/or individual learner assistance. All instructional activities are directed toward you meeting each of the course objectives and achieving successful course and work-place outcomes.



*Escherichia coli* (*E. coli*)

(From fineartamerica: <http://fineartamerica.com>)



*Streptococcus pyogenes* (*S. pyogenes*)

(From Nizet Lab: <http://nizetlab.ucsd.edu/research>)

What type of organisms are these, and how do they affect humans?

### Learning outcomes:

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 Objectives

After successfully completing the course, the student will be able to:

1. **apply** the scientific method of inquiry.
2. **define** anatomical and medical vocabulary as it relates to pathophysiology.
3. **distinguish** and **characterize** the pathophysiology of major organ systems: integumentary, musculoskeletal, nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary, and reproductive.
4. **identify** and **describe** various mechanisms of disease, in adults and children.

### Contacting the Instructor:

The best way to reach me is through email. There is a Brightspace email button right in the course under communications. Use your SMCC student e-mail for all other correspondences. I try and respond to all emails within 24-48 hours (most of the time within 24 hours). If for some reason I don't respond don't hesitate to email me again. I do take Saturday as a family day, so I am not online on Saturdays.

### Schedule:

Please see the end of syllabus for course schedule (assignment due dates, exams, etc). It can be helpful to print the course schedule and check off the items as you complete them, so you can be sure you've completed all of the graded work for the week. *The due dates are really "due by" dates. Work is due by 11:59pm on the last day of each availability period and can be submitted anytime during its availability period. Don't wait until the last minute to submit work!*

### Attendance Policy:

There is no specific amount of time that you must spend in our course, however I strongly recommend that you log in 3-4 times per week (non-consecutive days). There is work to do every week, so full attendance and participation are expected. To be considered "present" for class, you must be submitting work regularly, as required throughout the semester.

Failure to log in for a two-week period (14 days in a row with no logins at all) OR missing all the assigned work during a two-week period (even if logging in) without having contacted me ahead of time to explain the reason in either case, will result in administrative failure (grade of AF). The attendance policies in your other online courses may be different from this one.

### **Late and Makeup Work:**

The way to do well in this course is to be aware of what's coming up and complete ALL work to a high standard. Due dates for all work show up on the schedule. I also understand that life happens. Communication is key, especially in a fully online course. If something comes up, please reach out to me ASAP so a plan can be put into place. You MUST reach out before the due date to see if an extension is possible without deduction. Late deduction for work turned in after the due date without an extension:

Assignments turned in after the due date will lose 5 points per day it's late. Late work will also not be accepted after it's 7 days late and/or an exam has been given over the material.

Exams need to be submitted on time and cannot be done late unless there's an extreme circumstance and approval by the instructor prior to the exam due date.

The discussion board rubric has timeliness as part of the grading. Please see the grading rubric regarding late discussion posts. Discussions are not accepted once they are 7+ days late.

Extra credit work isn't available in this course, and I don't drop any grades. Incomplete (I) grades are available only in extreme, narrow circumstances.

### **Files in Brightspace-**

Some assignments specify the type of file to submit. For others you can choose the file type, however not all file types are accepted in Brightspace (i.e. pages, keynote, HEIC, and a few others. Please see the item in the Welcome folder for accepted file types.

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## **SMCC Policies**

### **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.

### **For Classes with any Face- to -Face Component: (NOTE: our course does not have a face to face component)**

While the syllabus represents current plans, there may be changes during the semester in response to the on-going Covid-19 pandemic. Depending on the progression of the virus, it is possible that the College may have to suspend face-to-face instruction for part of the semester. If we must stop face to face instruction anytime during the semester, your instructor will contact you via your SMCC email or the Brightspace course homepage to discuss next steps for the course.

### **ADA Syllabus 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:**

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 Fall 2021 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.

#### **SMCC Pay-for-Print Policy:**

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The College’s pay-for-print system monitors printing on all printers (including those in general access labs, library printers, Tutoring Services, Campus Center Lounge and technology labs). Be sure to log OUT of the system when you’ve finished your printing, to prevent unauthorized access to your account. Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an e-mail to [helpdesk@smccme.edu](mailto:helpdesk@smccme.edu).

#### **Refunds:**

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student’s account.

#### **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 12<sup>th</sup> week of the fall and spring semesters and the second through ninth week of 12-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.

**NOTE:** *Withdrawals do not affect your GPA, but they **DO** affect your course completion rate.*

#### **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.

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## What am I graded on in the course?

### Student Evaluation and Grading

#### **Background information about Pathophysiology:**

*"Science is the use of evidence to construct testable explanations and predictions of natural phenomena, as well as the knowledge generated through this process." (National Academy of Sciences, 2008).*

Pathophysiology is a biological science, and literally means “disease-causing changes to body functions.” Disease is the deviation from the normal state of wellness, which considers not only the physical aspect of health, but the mental and social aspects as well. This course focuses on the physical aspects of disease in adults and children. Our knowledge about health and disease has built slowly over thousands of years of observing, studying, reporting, experimenting with, and comparing phenomena in an effort to improve the human quality of life. This is the **scientific method** of research and discovery that helps us explain the world we live in, and that lives within us.

This course investigates physical diseases and disorders, both genetic and acquired that affect the function of the major organ systems you learned about in Anatomy and Physiology I and II. Much of the information will already be familiar to you, but what isn’t familiar should easily connect to the knowledge base you bring with you. (That’s when it gets *really* interesting!) Your A&P textbook will be a good reference. Our textbook also includes some anatomy/physiology review.

As you’re aware, one of the biggest continuing challenges in learning about the human body is the vocabulary. Your foundation from A&P will be very helpful in understanding the new concepts and vocabulary in this course. You may even want to refer to your anatomy textbook for more information if needed for better understanding.

Here too, constant exposure to the subject (revisiting the material frequently) is the best way to continue building your knowledge. By now, you’ve developed some good study habits and found an approach that works well for you.

***What’s involved with grading-*** Earning a good grade in any course isn’t difficult if you’re aware of and follow the course policies, have realistic expectations of yourself and your circumstances, complete all work to a high standard, and understand that you are responsible for your performance.

#### **Graded work required:**

Assignments	35%
Discussions	35%
Exams	<u>30%</u>
<b>Total</b>	<b>100%</b>

### **Calculating your own grade:**

All graded items are listed on the schedule. You should always know where you stand, grade-wise, in any course. On this page and the next page, there is more information about the graded items above. More information is also posted in Brightspace. You will see a “grade estimate” column in “grades”. This column is an ongoing calculation of grades; however, it only takes into account the items you have a grade for. For instance, if an assignment hasn’t been graded your grade may not be 100% accurate as this assignment wouldn’t be in the calculation.

<b>Grade scale:</b>	100-93 = A	86-83 = B	76-73 = C	66-63 = D
	92-90 = A-	82-80 = B-	72-70 = C-	62-60 = F
	89-87 = B+	79-77 = C+	69-67 = D+	

### **Assignments (35%):**

You will have a variety of assignments during this course. Assignments are used in this course as a way to apply and utilize the information we are learning about in the chapters. There is a lot of detail in pathophysiology, so continued use and application can help you with retention of the information. Assignments include but are not limited to, chapter outline, creating an in-service, word search, journal article, patient information sheet, case studies, infographic, and table. Assignments are due by Sunday at 11:59pm for the week they occur in.

**NOTE:** *You only get 1 attempt to upload your assignment file, so you need to be sure that what you want graded is what you’ve submitted, as well as all files/images/pages need to be uploaded in the single attempt. I will not accept assignments via email. They must be submitted in Brightspace.*

**IMPORTANT TIP:** When you submit an assignment, make sure the file you’re attaching isn’t open on your computer. If it is, it may attach it as a blank document. I recommend adding the word *final* to your file title. This way when you attach the file you know it’s your completed file you want graded. You can see your file name before hitting submit. I also recommend not waiting until the last minute. I’ve found in the past some students waiting until the final minutes to submit and then running into an issue. If you submit earlier, I may be able to assist you. If you’ve made an error and need a re-submission, there will be a 5-point deduction. You must get approval for re-submission.

### **Discussions (35%):**

The weekly discussions are a little different than what you may be thinking by the title. These discussions aren’t simply posting a question, answering, etc. Discussions in this course are a way to explore the information in the chapters further, as well as apply what you are learning about. You will also be adding new information and/or resources to a classmate’s post each week. Applying and researching the information further will help with retention and recall of the information. Each weekly folder where there is a discussion includes a direct link to the discussion board, as well as a description of what to post for a discussion topic, etc.

Your initial post is due on Thursday at 11:59pm for the week it’s in and the response post is due by Sundays at 11:59pm for the week it is in (except week 1-all items due by Sunday). Any post that is plagiarized will cause the entire participation grade for that week to be zero, so make sure you’re summarizing into your own words. Quoted material earns no credit (since that isn’t your own work). Some properly quoted material is okay, however make sure the material in your own words meets the grading criteria. **ALL posts MUST have a resource. If it’s personal knowledge or work experience you must list that for your source.** More information about Discussions is available in Brightspace and in the grading rubric. Because each

discussion grade includes BOTH your initial post, as well, as response posts, a grade will not be given until after Sundays when all posts are in.

I have included a General Question/Discussion area in the discussion board. Use this area to post general questions or comments such as navigating through the course, or regarding something you've read in the material. If you see a question you know the answer to feel free to respond. Feel free to use this section like a study group too. If you find a helpful website or have helpful tips, feel free to share here. Do not submit assignments here. This is an area for all of you to discuss things with one another and assist one another similar to what you would do in an on campus face-to-face class. I will periodically add to discussions in here, however it is mainly a section for all of you. If you have specific questions for me, you can always email me.

### **Assessments (exams):**

Assessments in Brightspace come in the form of exams. All exams are graded, and they count toward your course grade. They are also timed, which means you must finish each one within its allotted time period. When time is up, the exam will no longer save the work completed after the allotted time. The **exams need to be completed in one sitting, so you cannot logout and then go back into them.**

I don't provide study guides for the exams since everyone has different study techniques that work for them. One great skill at the college level is to find the study technique that works for you, and also to create your own study guides. I'm happy to work with you on this too. Books and notes are allowed while taking the exams, however you may NOT use the internet, classmates, family members, or friends while taking the exam. Even though your book is allowed you need to have a good foundational knowledge of the content. You will need this knowledge in future courses and your career. The exam is also timed, so if you are relying on looking everything up you may not finish all the questions.

### **Exams (30%):**

Exams are intended to measure your understanding of the material. We will have 5 exams. For each exam, one attempt is available during the week the exam is in. The exams are timed and must be completed in one sitting. Questions come from the weekly readings, including instructional materials, and publisher materials (i.e., exam test banks, etc.). Exams will consist of multiple-choice questions.

**IMPORTANT NOTE:** Before taking an exam, be sure that you are logged into Brightspace **only**. Also, Firefox and Chrome seem to be the most stable browsers for Brightspace, so use it rather than Internet Explorer or Safari. **NOTE: No retakes or makeups are available for any exam unless in an extreme situation and approval must be given by the instructor prior to the due date.**

### **Discussion Board Grading Rubric**

*Each Post is worth up to 5 points: 1 point for each category. Please see columns .25, .5, .75, and 1.0 for details in earning full credit for each post*

Category	0	.25	.50	.75	1.0
<b>Content</b> Initial post	No post	Post does not relate to the discussion; doesn't answer discussion questions	Thoughts were partially developed and addressed some of the aspects relevant to the prompt	Thoughts were well developed and addressed basic aspects relevant to the prompt; demonstrated base knowledge of concepts.	Thoughts were well developed and fully addressed all aspects relevant to the prompt; demonstrated excellent integration of key concepts.
<b>Timeliness</b> Initial post	No post; post more than 7 days late	Initial post 3-7 days late	Initial post 2 days late	Initial post 1 day late	Initial post on time
<b>Research sources/Citations</b> Initial post  <i>NOTE: all posts need to include source used!</i>  <i>if you used just the text site the text; if it's personal knowledge state "personal knowledge/experience)</i>	No source	May answer question but does not contribute new material from source other than the textbook. Reference mentioned by name in the post, however not listed in APA or MLA format	References are made to the text and mention material outside of the textbook in 5-25% of the post. Partial reference using APA or MLA format; web address only	References are made to the text or other required reading in the post, and on occasion to other relevant resources. 25-50% of material relates to other sources than the textbook. Partial reference using APA or MLA format; web address only	Consistently contributes to class discussions by including related websites, current events noted in online publications, etc. (>50%) IN ADDITION to text and required reading references. Full proper APA or MLA format
<b>Professionalism/ Grammar</b> Initial post	Unprofessional language; plagiarized; all quotations and no summarized information	Poor spelling and grammar in (> 50% of post)	Moderate amount misspellings or poor grammar (25-50% of post)	Few grammatical or spelling errors (25% of post)	Consistently using correct grammar in post with rare misspellings (<25%)
<b>Response to classmates</b>  <i>NOTE: You are only required to respond to one classmate, however, feel free to respond to more than one. Just make sure at least one response meets the grading criteria.</i>	No post	No response post; or post does not demonstrate thinking or questioning related to the online discussion; response post 3-7 days late; poor spelling and grammar in (> 50% of post)	Demonstrates little informed knowledge, thinking, and/or questioning; response post 2 days late; moderate amount misspellings or poor grammar (25-50% of post)	Demonstrates appreciation and questioning of other students' contributions and of the topic(s) at hand; some elaboration on the topic; adds new information to the post in the response; response post 1 day late; few grammatical or spelling errors (25% of post)	Demonstrates informed knowledge, analysis, in-depth thinking, and quality questioning of other students' contributions and of the topic(s) at hand; includes additional new information or resources in response; response post on time; consistently using correct grammar in posts with rare misspellings (<25%)



**Schedule** \_(Subject to change. Changes will be posted in the announcements)

*Important Dates; 1/25-last day to drop; 4/19- last day to withdraw; 5/14 (Saturday) semester ends*

**NOTE: I have listed all of the chapters we will cover. Some chapters we are covering the full chapter, while others we are only covering part of the chapter. Details are in the weekly folder. Some of the chapters cover material from anatomy/physiology and are great to review even if not assigned.**

Week	Chapter/Topic/Notes	Due by Date	Posts/Assignments Due
<b>Week 1</b> (1/18-1/23)	Welcome! Ch.1: Introduction to Pathophysiology Ch.2: Fluid, Electrolyte, and Acid-Base Imbalances	1/23	Initial post week 1 post Assignment-Chapter Outline Response post week 1
<b>Week 2</b> (1/24-1/30)	Ch.5: Inflammation and Healing Ch.6: Infection	1/27	Initial post week 2
		1/30	Assignment-Case study creation Response post week 2
<b>Week 3</b> (1/31-2/6)	Ch.7: Immunity	2/3	Initial post week 3
		2/6	Response post week 3 <b>Exam 1 (Ch 1, 2, 5, 6)</b>
<b>Week 4</b> (2/7-2/13)	Ch.20: Neoplasms and Cancer	2/10	Initial post week 4
		2/13	Assignment-In-service Response post week 4
<b>Week 5</b> (2/14-2/20)	Ch.8: Skin Disorders	2/17	Initial post week 5
		2/20	Assignment-Table Response post week 5
<b>Week 6</b> (2/21-2/27)	Ch.9: Musculoskeletal System Disorders	2/24	Initial post week 6
		2/27	Assignment-Infographic Response post week 6 NOTE: infographic assignment first appears in week 5- you have weeks 5 and 6 to complete
<b>Week 7</b> (2/28-3/6)	Ch.10: Blood and Circulatory System Disorders Ch.11: Lymphatic System Disorders	3/3	Initial post week 7
		3/6	Response post week 7 <b>Exam 2 (Ch 7, 8, 9, 20)</b>
<b>Week 8</b> (3/7-3/13)	Ch.12: Cardiovascular System Disorders	3/10	Initial post week 8
		3/13	Assignment-Journal article Response post week 8

Schedule Continued on the next page....

Schedule Continued

Week	Chapter/Topic/Notes	Due by Date	Posts/Assignments Due
<b>Week 9</b> (3/14-3/20)	<b>Spring Break</b> No new work due. Feel free to study material we've gone over and start reading the next chapter		
<b>Week 10</b> (3/21-3/27)	Ch.13: Respiratory System Disorders	3/24	Initial post week 10
		3/27	Assignment-Patient information sheet Response post week 10
<b>Week 11</b> (3/28-4/3)	Ch.14: Nervous System Disorders	3/31	Initial post week 11
		4/3	Response post week 11 <b>Exam 3 (Ch 10, 11, 12, 13)</b>
<b>Week 12</b> (4/4-4/10)	Ch.15: Disorders of the Eyes, Ears, and other Sensory Organs Ch.16: Endocrine System Disorders	4/7	Initial post week 12
		4/10	Assignment-Word search Response post week 12
<b>Week 13</b> (4/11-4/17)	Ch.17: Digestive System Disorders	4/14	Initial post week 13
		4/17	Assignment- Digestive case study Response post week 13
<b>Week 14</b> (4/18-4/24)	Ch.18: Urinary System Disorders	4/21	Initial post week 14
		4/24	Response post week 14 <b>Exam 4 (Ch 14, 15, 16, 17)</b>
<b>Week 15</b> (4/25-5/1)	Ch.19: Reproductive System Disorders	4/28	Initial post week 15
		5/1	Assignment-Reproductive case study Response post week 15
<b>Week 16</b> (5/2-5/8)	Ch 21: Congenital and Genetic Disorders Ch.23: Complications of Adolescence	5/5	Initial post week 16
		5/8	Assignment-Congenital and Genetic Case Study Response post week 16
<b>Week 17</b> (5/9-5/14)	Wrapping Up <i>Semester ends on SATURDAY!!</i>	5/14	Course Evaluations <b>Exam 5 (Ch 18, 19, 21, 23)</b>

**Questions and discussions are encouraged all the time, anytime. If you need help developing a schedule, time management, study strategies, etc please reach out to me. I'm happy to help.**