NURSING PATHOPHYSIOLOGY (RNSG 1311)

CREDIT
3 Semester Credit Hours (3 hours lecture, 1 hour lab) 64 Contact Hours

MODE OF INSTRUCTION
Face to Face/Hybrid

PREREQUISITE/CO-REQUISITE:
Prerequisite: Completion of all pre-requisites for the AASN Program; special permission to enroll in the course.

COURSE DESCRIPTION
Basic principles of pathophysiology emphasizing nursing applications. Includes epidemiologic factors that alter the normal physiological processes across the lifespan. This course lends itself to either a blocked or integrated approach.

COURSE OBJECTIVES/ COURSE MEASURABLE LEARNING OUTCOMES

Upon completion of this course, the student will be able to		**End of Program Student Learning Outcome (EOP SLO)**	**Differentiated Essential Competency (DEC)**
1.	*Discuss pathological changes in human tissue and systems.	2,3	PCC A1ab, B1,6,8, C6, E1ab, 5, F1,2
2.	*Relate the diagnosis, treatment modalities and potential outcomes of pathology.	4,5,6,7,8	PCC A1a,b,2b,8, B6, E1a,5, F2
3.	*Explain the significance of pathophysiology in professional nursing practice.	2,8	PCC A4, B4,6, E1ab, 5, F2
3.	Identify normal physiologic concepts and processes across the lifespan.	2,8	PCC 2b,D3a, E1a,b, F2
4.	Classify internal (genetic) and external (environmental) risk factors for pathophysiologic processes.	2,8	PCC A4, B4,6, E1ab, 5, F2
6.	Explain physiologic adaptation to pathophysiologic processes.	2,8	PCC A4, B4,6, E1ab, 5, F2
7.	Recognize manifestations of pathophysiologic and maladaptive processes.	2,8	PCC A4, B4,6, E1ab, 5, F2

Approved: NPA/June 2025

8.	Discuss short-term and long-term consequences of maladaptive responses to pathophysiologic processes.	2,8	PCC A4, B4,6, E1ab. 5, F2

*Note: * indicates WECM End-of-Course Outcome.*

INSTRUCTOR CONTACT INFORMATION

Instructor: Misty Jones, MSN ED., RN
Email: msjones1@lit.edu
Office Phone: (409) 241-7282
Office Location: WAHTC 340
Office Hours: Tuesdays & Thursdays 1:00 – 3:30 pm

REQUIRED TEXTBOOK AND MATERIALS

Huether, S., McCance, K., & Brashers, V. (2026). *Understanding Pathophysiology* (8th ed.). Elsevier Health Sciences (US).

ATTENDANCE POLICY

Students are expected to attend all classes. Therefore, absences should not be scheduled. If a student experiences an unplanned absence (illness or emergency), the student must contact the course faculty member by email or the administrative associate for the nursing program prior to the scheduled class and provide documentation of the absence. Failure to notify faculty and/or provide adequate documentation of the absence may result in an unexcused absence and initiation of the disciplinary process.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

OUTLINE

I. Pathophysiology Concepts
   A. Cellular and tissue physiology
   B. Fluids and Electrolytes
   C. Acid-base Balance
   D. Genetic link to pathophysiology
   E. Genetics, Environment, and Lifestyle Interactions

II. Immunity and Self-defense
   A. Innate
   B. Adaptive
   C. Maladaptive
   D. Pathophysiology/ Infection
   E. Genetics, Environment, and Lifestyle Interactions (stress)

III. Cancer Concepts
   A. Cellular Proliferation and Differentiation
   B. Metastasis
   C. Genetics, Environment, and Lifestyle Interactions
   D. Pathophysiology
   E. Adaptation to pathophysiologic processes
   F. Manifestations of pathophysiologic and maladaptive processes
   G. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

IV. Neurologic System Alterations & Adaptation
   A. Normal physiology across the lifespan (review)
   B. Genetics, Environment, and Lifestyle Interactions
   C. Pathophysiology
   D. Adaptation to pathophysiologic processes
   E. Manifestations of pathophysiologic and maladaptive processes
   F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

V. Endocrine System Alterations & Adaptation
   A. Normal physiology across the lifespan (review)
   B. Genetics, Environment, and Lifestyle Interactions
   C. Pathophysiology
   D. Adaptation to pathophysiologic processes
   E. Manifestations of pathophysiologic and maladaptive processes
   F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

VI. Reproductive System Alterations & Adaptation
   A. Normal physiology across the lifespan (review)
   B. Genetics, Environment, and Lifestyle Interactions
   C. Pathophysiology
   D. Adaptation to pathophysiologic processes
   E. Manifestations of pathophysiologic and maladaptive processes
   F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

VII. Hematologic System Alterations & Adaptation
   A. Normal physiology across the lifespan (review)
   B. Genetics, Environment, and Lifestyle Interactions
   C. Pathophysiology
   D. Adaptation to pathophysiologic processes
   E. Manifestations of pathophysiologic and maladaptive processes
   F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

VIII. Cardiovascular and Lymphatic System Alterations & Adaptation
   A. Normal physiology across the lifespan (review)
   B. Genetics, Environment, and Lifestyle Interactions

C. Pathophysiology
D. Adaptation to pathophysiologic processes
E. Manifestations of pathophysiologic and maladaptive processes
F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

IX. Pulmonary System Alterations & Adaptation
A. Normal physiology across the lifespan (review)
B. Genetics, Environment, and Lifestyle Interactions
C. Pathophysiology
D. Adaptation to pathophysiologic processes
E. Manifestations of pathophysiologic and maladaptive processes
F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

X. Renal and Urologic System Alterations & Adaptation
A. Normal physiology across the lifespan (review)
B. Genetics, Environment, and Lifestyle Interactions
C. Pathophysiology
D. Adaptation to pathophysiologic processes
E. Manifestations of pathophysiologic and maladaptive processes
F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

XI. Digestive System Alterations & Adaptation
A. Normal physiology across the lifespan (review)
B. Genetics, Environment, and Lifestyle Interactions
C. Pathophysiology
D. Adaptation to pathophysiologic processes
E. Manifestations of pathophysiologic and maladaptive processes
F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

XII. Musculoskeletal System Alterations & Adaptation
A. Normal physiology across the lifespan (review)
B. Genetics, Environment, and Lifestyle Interactions
C. Pathophysiology
D. Adaptation to pathophysiologic processes
E. Manifestations of pathophysiologic and maladaptive processes
F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

XIII. Integumentary System Alterations & Adaptation
A. Normal physiology across the lifespan (review)
B. Genetics, Environment, and Lifestyle Interactions
C. Pathophysiology
D. Adaptation to pathophysiologic processes
E. Manifestations of pathophysiologic and maladaptive processes

F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

XIV. Multiple Interacting System Concepts

A. Inflammation
B. Adaptation to pathophysiologic processes
C. Manifestations of pathophysiologic and maladaptive processes
D. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes

COURSE CALENDAR

DATE	TOPIC	READINGS	EVALUATION & ASSIGNMENTS
Module 1 Tuesday 6/3/25 & 6/5/25 (if needed)	I. Pathophysiology Concepts A. Cellular and tissue physiology (review) B. Genetic link to pathophysiology C. Genetics, Environment, and Lifestyle Interactions D. Fluids and Electrolytes E. Acid-base Balance	Understanding Pathophysiology (2026) Chapter(s) 1-5 **DUE**: before class	Syllabus Quiz Module 1 Post lecture Quiz
Module 2 Thursday 6/5/25 & 6/10/25 (if needed)	II. Immunity and Self-defense A. Innate B. Adaptive C. Maladaptive D. Pathophysiology/ Infection E. Genetics, Environment, and Lifestyle Interactions (stress)	Understanding Pathophysiology (2026) Chapter(s) 6-10 **DUE**: before class	Module 2 Post Lecture Quiz

Module 3 Tuesday 6/10/25 & 6/12/25 (if needed)	III. Integumentary System A. A. Normal physiology across the lifespan (review) B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology D. Adaptation to pathophysiologic processes E. Manifestations of pathophysiologic and maladaptive processes F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s) 43-44	Module 3 Post Lecture Quiz
Module 4 Thursday 6/12/25 & 6/17/25 (if needed)	IV. Neurologic System a. Normal physiology across the lifespan (review) b. Genetic and environmental risk factors for pathophysiologic processes c. Pathophysiology d. Adaptation to pathophysiologic processes E. Manifestations of pathophysiologic and maladaptive processes F. Short-term and long-term consequences	Understanding Pathophysiology (2026) Chapter(s) 14-18 **DUE**: before class	Module 4 Post Lecture Quiz

	of maladaptive responses to pathophysiologic processes		
6/17/25	**Discussion #1 – GRADED ASSIGNMENT**		**See Blackboard – DUE @1159 pm**
Thursday 6/19/25	Exam 1		See Exam Blueprint
Module 5 Tuesday 6/24/25 & Thursday 6/26/25 (if needed)	V. Renal and Urologic System A. Normal physiology across the lifespan (review) B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology D. Adaptation to pathophysiologic processes E. Manifestations of pathophysiologic and maladaptive processes F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s)31-33 **DUE**: before class	Module 5 Post Lecture Quiz
Module 6 Thursday 6/26/25 & Tuesday	XI. Digestive System A. Normal physiology across the lifespan (review)	Understanding Pathophysiology (2026) Chapter(s) 37-39	Module 6 Post Lecture Quiz

7/1/25 (if needed)	B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology D. Adaptation to pathophysiologic processes E. Manifestations of pathophysiologic and maladaptive processes F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	**DUE**: before class	
Module 7 Tuesday 7/1/25 & Thursday 7/3/25 (if needed)	VII. Cardiovascular and Lymphatic System Alterations A. normal physiology across the lifespan (review) B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology D. Adaptation to pathophysiologic process. E. Manifestations of pathophysiologic and maladaptive processes F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s) 25-27 **DUE**: before class	Module 7 Post Lecture Quiz

Module 8 Thursday 7/3/25 & Tuesday 7/8/25	VIII. Pulmonary System • Normal physiology across the lifespan (review) • Normal physiology across the lifespan (review) • Genetics, Environment, and Lifestyle Interactions • Pathophysiology • Adaptation to pathophysiologic processes • Manifestations of pathophysiologic and maladaptive processes • Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s) 28-30 **DUE**: before class	Module 8 Post Lecture Quiz
Tuesday 7/8/25	**Discussion #2 – GRADED ASSIGNMENT**		**See Blackboard – DUE @1159 pm**

Thursday 7/10/25	Exam 2		See Exam Blueprint
Module 9 Tuesday 7/15/25	IX. Cancer A. Cellular Proliferation and Differentiation B. Metastasis C. Genetics, Environment, and Lifestyle Interactions D. Pathophysiology E. Adaptation to pathophysiologic processes F. Manifestations of pathophysiologic and maladaptive processes G. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s) 11-13 **DUE**: before class	Module 9 Post Lecture Quiz
Module 10 Thursday 7/17/25	X. Hematologic System Alterations A. Normal physiology across the lifespan (review) B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology D. Adaptation to pathophysiologic processes E. Manifestations of pathophysiologic and maladaptive processes	Understanding Pathophysiology (2026) Chapter(s) 22-24 **DUE**: before class	Module 10 Post Lecture Quiz

	F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes		
Module 11 Tuesday 7/22/25	XI. Endocrine System Alterations • Normal physiology across the lifespan (review) • Genetics, Environment, and Lifestyle Interactions • Pathophysiology • Adaptation to pathophysiologic processes • Manifestations of pathophysiologic and maladaptive processes • Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s) 19-21 **DUE**: before class	Module 11 Post Lecture Quiz
Module 12 Thursday 7/24/25	XII. Musculoskeletal System A. Normal physiology across the lifespan (review)	Understanding Pathophysiology (2026) Chapter(s) 40-42	Module 12 Post Lecture Quiz

	B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology D. Adaptation to pathophysiologic processes E. Manifestations of pathophysiologic and maladaptive processes F. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	**DUE**: before class	
Module 13 Tuesday 7/29/25	XIII. Reproductive System A. Normal physiology across the lifespan (review) B. Genetics, Environment, and Lifestyle Interactions C. Pathophysiology Adaptation to pathophysiologic processes D. Manifestations of pathophysiologic and maladaptive processes E. Short-term and long-term consequences of maladaptive responses to pathophysiologic processes	Understanding Pathophysiology (2026) Chapter(s) 34-36 **DUE**: before class	Module 13 Post Lecture Quiz
7/29/25	**Discussion #3 – GRADED ASSIGNMENT**		**See Blackboard –**

			DUE @1159 pm
Tuesday 7/31/25	**Exam 3**		See Exam Blueprint
Tuesday 8/5/25	**Comprehensive Review**		
Thursday 8/7/25	**Comprehensive Final Exam**		See Exam Blueprint

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

Evaluation Method	**Course Grade %**
1. *Post-lecture Quizzes	7.5%
2. *Blackboard Ultra Assignments	7.5%
3. Exam I	20%
4. Exam II	20%
5. Exam III	20%
6. Comprehensive Final Exam	25%
Total:	100%

Note: *Students must have a 75% average on exams for the Post-lecture Quizzes and Blackboard Ultra Assignments to be counted in the final course grade. If 75% on all exams is not achieved by the end of the course, the student will earn the grade from all averaged exams.* ***See below to calculate your grade, using the 75% rule:***

GRADE	**X**	**PERCENT**	**=**	**GRADE POINTS**
EXAM 1	**X**	0.20 (20%)	**=**	
EXAM 2	**X**	0.20 (20%)	**=**	
EXAM 3	**X**	0.20 (20%)	**=**	
FINAL	**X**	0.25 (25%)	**=**	
			TOTAL POINTS =	
			DIVIDE BY 0.85 (85%)	
			FINAL WEIGHTED EXAM GRADE	

GRADE SCALE

90-100 A

80-89	B	
75-79	C	*Required to progress in nursing program.
60-74	D	
0-59	F	

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

ACADEMIC DISHONESTY

Students enrolled in the nursing program at LIT must maintain academic and behavioral expectations consistent with the profession of nursing and in accordance with the nursing program Student Handbook. Standards of *nursing practice include (but are not limited to) behaviors indicating honesty, accountability, trustworthiness, reliability, and integrity.* The inability of a student to consistently conform his/her/their conduct to requirements of the Nursing Practice Act and BON rules and regulations through a single incident or pattern of personal, academic, or other unacceptable behaviors will result in the disciplinary process. The disciplinary process may include verbal counseling, written counseling, and or dismissal from the nursing program.

AI STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI / ChatGPT in their courses.

AI IN NURSING COURSES

Students are expected to follow course assignment instructions and grading rubrics. Unless otherwise indicated in the assignment instructions, information obtained through AI resources should not be submitted as a student's original work. Unless specifically granted by individual faculty members, students do not have permission to upload faculty intellectual property (PowerPoint Presentations, lecture notes, assignments, course materials, voice or lecture recordings to any AI platform. Students demonstrating these behaviors or other inappropriate use of AI may be subject to disciplinary process.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

COURSE GRADING AND ASSIGNMENTS

Class attendance and satisfactory completion of all assignments is essential in order to be successful in the course.

SHERPATH LESSONS

Sherpath lessons accompany the pathophysiology textbook and are accessed through the Evolve website using the student login and are linked to the Blackboard® course. These lessons are required to help you grasp the content we are covering, but they are not graded.

BLACKBOARD ULTRA ASSIGNMENTS

Three Blackboard Ultra Assignments that accompany the pathophysiology content will be assigned using the Discussion platform in Blackboard. Rubrics for the assignments can be found with the assignments. These assignments are assigned in order to reinforce student learning. Grades on Blackboard Ultra Assignments will be calculated into the course average after a 75% average on all exams is achieved.

POST-LECTURE QUIZZES

A post-lecture quiz will be assigned via Blackboard at the end of each learning module during class. Students must be present to receive a grade for the quiz. Students will have one attempt to complete the quiz. Grades for post-lecture quizzes will be calculated into the course average after a 75% average on all exams is achieved.

COURSE EXAMS

Three unit exams and a comprehensive final exam will be administered during this course. Exams will be taken in person and during class time. Upon entry to the testing room, students must show the official LIT Student ID. The ID must always remain visible on the student's desk during exam administration. The following items are not allowed in the testing room:

- Hats, caps, scarfs, hooded shirts (unless religious covering)
- Food, candy, drinks
- Cell phone, electronic devices, smart watches, smart glasses, recording devices

LATE ASSIGNMENTS

Late assignments are generally not accepted in this course. Due dates for assignments are clearly marked on the syllabus and known at the beginning of the course. Students with extenuating circumstances such as severe illness or victims of a natural disaster must notify the faculty member of the circumstance and work collaboratively with faculty prior to the due date on the assignment to develop a plan for submitting the assignment. This collaboration should occur prior to the weekend or school holiday. Assignments will not be accepted late without prior arrangements. A five-point deduction for every day late will occur, and late assignments will not be accepted after 5 days from the initial due date. Students must be present to earn post-lecture grades, and all exams are taken in person. Students who are sick on exam day must notify faculty by email prior to the exam start time. Valid documentation must be provided to the faculty member in order for arrangements to be made for retaking the exam or an alternate solution as determined by the Nursing Program Director.

PERMISSION TO RECORD LECTURES

Students are not allowed to record (audio or video) lectures or class discussions without the expressed permission of the faculty member. This includes pictures of presentations.

CIVILITY

Learning can be an intimidating experience for some students. It is imperative that students in the AASN program are respectful and civil to student colleagues as well as faculty in order to

facilitate a safe and effective learning environment. It is imperative for students to realize that all students do not process information in the same manner or learn information in the same way. The AASN program faculty respect the diversity of our students, which includes diversity of learning styles. Civility is maintained when there is order, respect for the teaching and learning process, empathy, and consideration for others. Students are expected to demonstrate civility in the classroom, online environment, and in all face-to-face as well as electronic communications. Demonstrations of uncivil behavior are unacceptable, do not demonstrate attributes of a professional nurse, and may result in initiation of the disciplinary process including but not limited to the student being excused from the experience, course, and potentially the nursing program.