



Course Syllabus: Foundations of Comprehensive Pathophysiology
College of Robert D. & Carol Gunn College of Health Sciences & Human
Services

NURS 3733
Spring 2025

Contact Information

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Course Description

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1. This course is designed to enhance the working Rn's existing understanding of the pathophysiological processes of disease as they affect clients across the lifespan. The interrelationship of structural and functional reaction of cells and tissues to genetic alterations and injurious agents provide the foundation for comprehending clinical manifestations and treatment protocols. Critical thinking and nursing management are enhanced through the use of case studies that integrate nutritional and pharmacological concepts. The understanding of environmental and biological risks factors provides the nurse with the knowledge to provide health promotion and prevention education.
2. Credit hours for the course is 3 hours.
3. AACN Essentials: For further information regarding the AACN Essentials identified for each course objective, refer to: [The Essentials of Baccalaureate Education for Professional Nursing Practice](#)

Course Objectives

Upon completion of this course, the student will be able to:

1. Demonstrate understanding of the pathological processes and how these produce diseases.
2. Relate disease signs, symptoms and laboratory findings to their underlying pathology.

3. Use knowledge of genetic inheritance, environment, lifestyle choices and other identified risk factors to disease development and progression to identify patient education needs.
4. Evaluate for the presence and effects of compensatory mechanisms in response to major pathological alterations.
5. Apply knowledge of variables affecting the healing process in primary tissues an organ system to management of common diseases and injuries.
6. Employ select nursing and biomedical research studies in the application of pathophysiological principles to nursing practice.
7. Apply critical thinking process to the use of pathophysiologic principles as a basis for nursing practice.

Clinical Objectives

1. Demonstrate understanding of the pathological processes and how these produce disease (AACN VII, IX).
2. Relate disease signs, symptoms and laboratory findings to their underlying findings to their underlying pathology (AACN VII, IX).
3. Use knowledge of genetic inheritance, environment, lifestyle choices and other identified risk factors to disease development and progression to identify patient education (AACN III, VII, IX).
4. Evaluate for the presence and effects of compensatory mechanisms in response to major pathological alterations (AACN VII).
5. Apply knowledge of variables affecting the healing process in primary tissues and organ systems to management of common diseases and injuries (AACN VII, IX).

Textbook & Instructional Materials

Required textbook

American Psychological Association (2010). *Publication Manual of the American Psychological Association* (7th ed.). Washington D.C.

VanMeter, K.C. 7 Hubert, R. J.(2014). *Gould's pathophysiology for the health profession* (6th ed.). St. Louis, MO: Elsevier.

Student Handbook

Refer to: [Student Handbook 2020-21](#)

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individuals to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

Grading

Table 1: Points allocated to each assignment –

Assignments	Points
Discussion Board	40%
Essay Exams (4)	60%
Total Points	100%

Table 2: Total points for final grade. There will be no rounding of grades.

Grade	Points
A	90 to 100
B	80 to 89
C	79 to 74
D	65 to 73
F	64 and below

Projects Required

Assignments vary in each module and each assignment has its own rubric for completion and grading. Written work is to be completed and submitted electronically in the appropriate assignment (drop box) on D2L and submitted by 10 pm Central Time on due date. A course average of at least 74% is required to pass this course. Students must have an updated immunization records, a valid current CPR card, and Health Insurance and paid Liability Insurance on file with the Wilson School of Nursing secretary during the entire semester. In order to attend class or clinical experiences, each student **MUST** comply with each of these requirements. Faculty reserves the right to make changes at any time to this syllabus. Students are to be accountable for all communications sent by faculty on Desire 2 Learn; therefore, you **must** check the site for announcements, assignments, and messages. Faculty prefers students use D2L as a means to make a specific request or to ask for content clarification. I forward your D2L emails to my MSU email. If you are unable to access D2L, you may contact faculty via campus email. Campus and phone appointments are available upon request.

Discussion Board

You must post a substantive response to each of the required questions. A substantive response is constructive and adds value to the weekly

discussions. Substantive responses should be at least 150 words in length. Rarely should each require more than 200 words. Your responses need to reflect critical thought and demonstrate an understanding of the relevant concepts. All factual knowledge must be supported with appropriate citation of source. Response to the discussion board questions must be posted by 10:59 PM on or before the due date on the Discussion Board section in the appropriate Discussion Question thread as stated in the course outline. It is the responsibility of the student to post the assignment on the correct thread by 10:59 PM on or prior to the due date. Participation in the classroom discussion is required. In addition to posting your responses to the discussion questions you must post a substantive comment to at least two of your classmate's posts. This post may be made anytime during the week but must be made prior to the close of the week before the due date and time. Peer posts made after the due date and close of the week will not be accepted for credit.

Late Work

Assignments more than two days late will not be accepted. Assignments submitted late which are within two days of the due date will receive a ten percent deduction for each day they are late.

Important Dates

Last Day to drop with a grade of "W:" April 30, 2025.

Refer to: [Drops, Withdrawals & Void](#)

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Online Computer Requirements

Taking an online class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class.

Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings. Computers are available on campus in various areas of the buildings as well as the Academic Success Center. **Your computer being down is not an excuse for missing a deadline!!** There are many places to access your class! Our online classes can be accessed from any computer in the world which is connected to the internet. Contact your instructor immediately upon having computer trouble If you have

technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations however they are able to help you get connected to our online services. For help, log into [D2L](#).

Instructor Class Policies

Instructor Drop. An instructor may drop a student any time during the semester for excessive absences, for consistently failing to meet class assignments, for an indifferent attitude or for lack of engagement in the online learning environment. For example, failure to participate in online discussions as scheduled and on time is considered being absent. Prior to dropping a student from the class, the instructor must give the student a verbal or written warning. An instructor's drop of a student takes precedence over the student-initiated course drop at a later date. The instructor will assign a grade of WF or F the 6th week of a 10-week summer term. After this time, the grade will be an F. The date the Office of the Registrar receives the instructor drop form is the official drop date. RN Transition students must complete all nursing courses within a two-year period of time beginning with the first nursing course. RN Transition students must maintain enrollment in at least two courses per semester. If a student does not maintain enrollment for one semester they will be placed on inactive status. If a student were to withdraw for a second time from the same and or any nursing course and or received a second D or F in the same and or any nursing course, even if the student has repeated a course and received a grade of C or above the student will be dismissed from the program.

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the ***Schedule of Classes*** each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exist in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Disability Support Services

Midwestern State University is committed to providing equal access for qualified students with disabilities to all university courses and programs, and by law all students with disabilities are guaranteed a learning environment that provides reasonable accommodation of their disability. This guarantee is provided through Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. The ADA reads: "No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subject to discrimination by any such entity." The Director of Disability Support Services serves as the ADA Coordinator and may be contacted at (940) 397-4140, TDD (940) 397-4515, or 3410 Taft Blvd., Clark Student Center 168.

College Policies

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Grade Appeal Process

Students who wish to appeal a grade should consult the Midwestern State University [Undergraduate Catalog](#)

Notice

Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

Course Schedule

Week	Weekly Objectives (To be completed as independent study, building upon prior knowledge. Self-determined competence)	Assignment Due Date (Graded submissions)
<p>Week 1 Course Orientation, Introductions on Discussion Board, introduction to pathophysiology ; fluid, electrolyte, acid-base imbalance, and pain</p>	<p>Introduction to Pathophysiology What is pathophysiology and why study it? Introduction to cellular changes:</p> <ul style="list-style-type: none"> • Fluid, Electrolyte, and Acid-Base Imbalances • Fluid Imbalance • Electrolyte Imbalances • Acid-base Imbalance • Treatment of Imbalances • Pain • Etiology and Sources of Pain • Structures and Pain Pathways • Characteristics of Pain • Basic Classifications of Pain • Pain Control <p>Readings</p> <ul style="list-style-type: none"> • VanMeter & Hubert Chapter 1, 2 and 4. 	<p>Introduction Post Due by Friday 10:59PM Central Standard Time. and Week 1 Discussion post due by Friday 10:59PM Central Standard Time.</p> <p>The 2 peer response posts are due by Sunday 10:59PM Central Standard Time.</p>
<p>Week 2 Genetics and Genetic Abnormalities</p>	<p>Congenital and Genetic Disorders</p> <ul style="list-style-type: none"> • Review of Genetic Control • Congenital Anomalies • Genetic Disorders • Developmental Disorders • Diagnostic Tools • Genetic Technology • Down Syndrome • Blood and Circulatory System Disorders • Review of the Circulatory System and Blood • Blood Dyscrasias • Neoplastic Blood Disorders • Lymphatic System Disorders • Review of the Lymphatic System • Lymphatic Disorders <p>Readings</p> <ul style="list-style-type: none"> • VanMeter & Hubert Chapter 10,11, and 21. <p>Websites</p> <p>Human Genome Project Website</p>	<p>Week 2 discussion post due by Friday 10:59PM Central Standard Time. The 2 peer response posts are due by Sunday 10:59PM Central Standard Tim</p>

<p>Week 3 Immunity and Immune Disorders</p>	<p>Immunity</p> <ul style="list-style-type: none"> • Review of the Immune System • Tissue and Organ Transplant Rejection • Hypersensitivity Reactions • Autoimmune Disorders • Immunodeficiency <p>Readings</p> <ul style="list-style-type: none"> • VanMeter & Hubert Chapter 7 	<p>Week 3 Assignment 1 due by Sunday 10:59 PM Central Time.</p>
<p>Week 4 Inflammation and Inflammatory Disorders</p>	<p>Inflammation and Healing</p> <ul style="list-style-type: none"> • Review of Body Defenses • Review of Normal Capillary Exchange • Physiology of Inflammation • Acute Inflammation • Chronic Inflammation • Treatment of Inflammation • Healing • Examples of Inflammation and Healing • Skin Disorders • Review of the Skin • Skin Lesions • Inflammatory Disorders • Skin Infections • Skin Tumors • Skin Disorders • Bacterial Infections • Viral Infections • Fungal Infections • Other Infections <p>Readings</p> <ul style="list-style-type: none"> • VanMeter & Hubert Chapter 5 and 8. 	<p>Week 4</p> <p>discussion post due by Friday 10:59 PM Central Standard Time.</p> <p>The 2 peer response posts are due by Sunday 10:59 PM Central Standard Time.</p>
<p>Week 5 Cardiovascular, and Respiratory Diseases</p>	<p>Infection</p> <ul style="list-style-type: none"> • Review of Microbiology • Principles of Infection • Physiology of Infection • Cardiovascular System Disorders • Review of the Cardiovascular System • Heart Disorders • Vascular Disorders • Shock • Respiratory System Disorders • Review of Structures of the Respiratory System • General Manifestations of the 	<p>Week 5 discussion post due by Friday 10:59 PM Central Standard Time. 2 peer response due by Sunday 10:59 PM Central Standard Time</p>

	<p>Respiratory Disease</p> <ul style="list-style-type: none"> • Common Treatment • Measures for Respiratory Disorders • Infectious Diseases • Obstructive Lung Diseases • Chronic Obstructive Pulmonary Disease • Restrictive Lung Disorders • Vascular Disorders • Expansion Disorders <p>Readings</p> <ul style="list-style-type: none"> • VanMeter & Hubert Chapters 6, 12, 13, 24. <p>Website</p> <p>CDC Infectious Disease</p>	
<p>Week 6 Reproductive Urinary, and Eyes, and Ears.</p>	<p>Infection</p> <ul style="list-style-type: none"> • Review of Microbiology • Principles of Infection • Physiology of Infection • Urinary System Disorders • Urinary Tract Infections • Inflammatory Disorders • Reproductive System Disorders • Inflammation and Infections • Inflammatory Disorders • Diseases of the Eye and Ear (pages 390 to 398) • Infections and Trauma • Ear Infections <p>Readings</p> <p>VanMeter & Hubert Chapter 6 Chapter 18 Chapter 19</p>	<p>Week 6 discussion Initial Post due by Friday 10:59PM Central Standard Time. 2 peer posts are due by Sunday 10:59PM Central Standard Time.</p>
<p>Week 7 Malignancies</p>	<p>Neoplasms and Cancer Review of Normal Cells</p> <ul style="list-style-type: none"> • Benign and Malignant Tumors • Malignant Tumors: Cancer • Examples of Malignant Tumors • Blood and Lymphatic Disorders • Neoplastic Blood Disorders • Lymphatic Disorders • Urinary System Disorders • Congenital Disorders • Acute Neurologic Disorders • Acute Neurologic Problems 	<p>Week 7 Assignment 2 due By 10:59 Central Standard Time.</p>

	<ul style="list-style-type: none"> • Vascular Disorders • Infections • Brain Injuries • Spinal Cord Injury Skin Disorders • Skin Tumors • Benign Tumors • Malignant Tumors <p>Websites MD Anderson American Cancer Society</p> <p>Readings VanMeter & Hubert Chapter 20 • Chapter 10 • Chapter 18 Chapter 14 • Chapter 8 Chapter 19</p>	
<p>Week 8 Degenerative Disease and Disease related to Aging</p>	<p>Complications of Aging The Aging Process Physiological Changes with Aging Other Factors</p> <ul style="list-style-type: none"> • Multiple Disorders • Digestive System Disorders • Common Manifestations of Digestive System Disorder • Basic Diagnostic Tests • Common Therapies and Prevention • Upper Gastrointestinal Tract Disorders • Lower Gastrointestinal Tract Disorders • Chronic Neurologic Disorders • Chronic Degenerative Disorders • Dementia <p>Mental Disorders</p>	<p>Week 8 Initial discussion due by Friday 10:59PM Central Standard Time.</p> <p>2 peer posts are due by 10:59PM Central Standard Time.</p>
<p>Week 9 Diseases related to Trauma, Overuse or Immobility</p>	<p>Immobility and Associated Problems Factors Involving Immobility</p> <ul style="list-style-type: none"> • Musculoskeletal System Effects • Cutaneous Effects • Cardiovascular System Effects • Respiratory System Effects • Digestive System Effects • Urinary System Effects • Neurological System Effects 	<p>Week 9 discussion post due by Friday, 10:59PM Eastern Standard Time.</p> <p>2 peer posts due by Sunday 10:59PM Central</p>

	<ul style="list-style-type: none"> • Effects of Immobility on Children • Musculoskeletal Disorders • Review of the Musculoskeletal System • Trauma • Bone Disorders • Disorders of Muscle, Tendons, and Ligaments • Joint Disorders <p>Videos</p> <p>Fracture Healing Part 1</p> <p>Fracture Healing Part 2</p> <p>Pulmonary Thrombosis and Embolism</p> <p>Pressure Sores</p> <p>Websites</p> <p>Decubitus Ulcers</p> <p>Readings</p> <ul style="list-style-type: none"> • VanMeter and Humbert Chapter 09,14, and 25 	Standard Time.
<p>Week 10 Chemical Imbalance and Disorders of Regulation: Mental Health</p>	<p>Substance Abuse and Associated</p> <ul style="list-style-type: none"> • Problems • Terminology • Predisposing Factors • Environmental and Behavioral Risk Factors • Indications and Recognition of Abuse • Potential Complications of Substance Abuse • Treatment for Substance Abuse • Nervous System Disorders • Chronic Degenerative Disorders • Dementia • Mental Disorders • Spinal Cord Disorders <p>Readings</p> <p>VanMeter and Hubert Chapter 27 Chapter 14</p> <p>Videos</p> <p>Types of Schizophrenia A day in the life symptoms stimulation</p> <p>4 patients with Schizophrenia</p> <p>Websites</p>	<p>Week 10 discussion post due by Friday 10:59PM Central Standard Time.</p> <p>2 peer posts are due by Sunday 10:59PM Central Standard Time.</p>

	National Institute of Mental Health	
Week 11 Stress	Stress and Associated Problems <ul style="list-style-type: none"> • Review of the Stress Response • Stress and Disease Readings VanMeter and Hubert Chapter 26	Week 11 Assignment 3 due by Sunday 10:59 PM Central Time.
Week 12 Chemical Imbalances and Regulation: Endocrine Imbalances Part 1.	Endocrine System Disorders <ul style="list-style-type: none"> • Endocrine Disorders • Insulin and Diabetes Mellitus • Parathyroid Hormone and Calcium • Pituitary Hormone • Thyroid Disorders • Adrenal Glands Website American Diabetes Association	Week 12 discussion post due by Friday 10:59PM Central Standard Time. 2 peer posts are due by Sunday 10:59PM Central Standard Time.
Week 13 Lifestyle and Disease	Cardiovascular Disorders <ul style="list-style-type: none"> • Heart Disorders • Shock Readings: VanMeter and Hubert Chapter 12 Videos What happens during a heart attack What Is Heart Disease? Preventing Coronary Artery Disease Websites Pathophysiology of Hypertension American Heart Association American Heart Association and American Stroke Association Stroke Guidelines National Stroke Association	Week 13 discussion post due by Friday 10:59PM Central Standard Time. 2 peer posts due by Sunday 10:59PM Central Standard Time.
Week 14 Disease Interactions	Textbook Readings: VanMeter and Hubert Chapter 12, and 16 Read the two following articles: Riaz, K. and Ali, Y.S. (2015). Hypertensive Heart Disease. https://emedicine.medscape.com/article/241381-overview Montine, T.J. and Adesina, A.M. (2015). Dementia Pathology.	Week 14 Assignment 4 due Sunday 10:59 PM Central Time.

