

NURS-3200: PATHOPHYSIOLOGY AND HEALTH ASSESSMENT

Cuyahoga Community College

Viewing: NURS-3200 : Pathophysiology and Health Assessment

Academic Term:

Fall 2026

Subject Code

NURS - Nursing

Course Number:

3200

Title:

Pathophysiology and Health Assessment

Catalog Description:

This course examines the pathophysiology of selected health conditions, focusing on etiology, pathogenesis, physiological changes, and clinical manifestations. Students will explore disease mechanisms, the body's compensatory responses, and the impact of genetic and cultural factors on health. Through a patient-centered approach, they will apply pathophysiological concepts to disease assessment and management, strengthening clinical reasoning and evidence-based practice.

Credit Hour(s):

3

Lecture Hour(s):

3

Requisites

Prerequisite and Corequisite

NURS-3100 Transition to Nursing Practice.

Outcomes

Course Outcome(s):

Apply pathophysiological concepts to assess, analyze, and interpret disease processes.

Objective(s):

1. Define pathophysiology and explain how altered physiology leads to common disease development.
2. Apply clinical reasoning skills to link assessment findings with potential disease processes.
3. Describe the innate immune system and its role as the body's first line of defense.
4. Identify common infectious agents and host responses.
5. Identify key pathophysiologic mechanisms in common immune and hematologic cardiovascular disorders.
6. Identify key pathophysiologic mechanisms in common cardiovascular and pulmonary conditions.
7. Identify key pathophysiologic changes in common neurological and endocrine conditions.
8. Identify key pathophysiologic changes in common gastrointestinal and renal conditions.
9. Identify key pathophysiologic changes in common musculoskeletal and skin conditions.

Course Outcome(s):

Integrate pathophysiological concepts of cellular adaptation, injury, and genetic influence into clinical assessments and nursing interventions.

Objective(s):

1. Explain mechanisms of cellular adaptation: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia, and cell injury.
2. Explain DNA structure and gene expression.
3. Describe patterns of inheritance and mutations.
4. Discuss epigenetic regulation in disease.

5. Identify common genetic disorders.
6. Evaluate the role of genetics in nursing care.

Course Outcome(s):

Demonstrate competence in performing health assessments that integrate pathophysiological insights.

Objective(s):

1. Apply clinical reasoning skills to link assessment findings with potential disease processes.
2. Identify clinical manifestations, risk factors, and complications of common hematologic, autoimmune, and infectious disorders.
3. Identify clinical manifestations, risk factors, and complications associated with common cardiovascular and pulmonary disorders.
4. Identify clinical manifestations, risk factors, and complications associated with common neurological and endocrine disorders.
5. Identify clinical manifestations, risk factors, and complications associated with common gastrointestinal and renal disorders.
6. Identify clinical manifestations, risk factors, and complications associated with common musculoskeletal and skin disorders.

Course Outcome(s):

Evaluate abnormal findings to guide nursing interventions and clinical decision-making.

Objective(s):

1. Evaluate diagnostic findings and assessment data to determine functional status and disease progression.
2. Apply clinical reasoning to identify disease progression and potential complications based on comprehensive patient data findings.

Course Outcome(s):

Recognize early cellular dysfunction and its role in disease progression.

Objective(s):

1. Describe cellular structure and function.
2. Explain mechanisms of cellular adaptation: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia, and cell injury.
3. Differentiate between necrosis and apoptosis.
4. Analyze clinical implications of cellular dysfunction on disease development.

Course Outcome(s):

Utilize evidence-based practice to enhance outcomes through pathophysiological reasoning.

Objective(s):

1. Integrate knowledge and evidence-based resources to support analysis and nursing care planning.
2. Utilize methodical, accurate, and evidence-based assessment techniques for clients across the lifespan.
3. Demonstrate thorough, relevant, and clear documentation of relevant normal or abnormal assessment findings.

Course Outcome(s):

Develop critical thinking to assess and manage complex conditions effectively.

Objective(s):

1. Analyze pathophysiologic concepts to interpret clinical signs, symptoms, and diagnostic findings in diverse patient populations.
2. Communicate findings and insights clearly and professionally through written analysis and reflective narrative.
3. Reflect on personal learning and growth in understanding disease mechanisms and their impact on nursing judgment.

Course Outcome(s):

Collaborate across disciplines to improve patient-centered care and disease management.

Objective(s):

1. Correlate immune, infection, and hematologic assessment findings with pathophysiology to support clinical judgment and care planning.
2. Correlate cardiovascular and pulmonary assessment findings with pathophysiology to support clinical judgment and care planning.
3. Correlate neurological and endocrine assessment findings with pathophysiology to support clinical judgment and care planning.
4. Correlate gastrointestinal and renal assessment findings with pathophysiology to support clinical judgment and care planning.
5. Correlate musculoskeletal and integumentary assessment findings with pathophysiology to support clinical judgment and care planning.

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Course Outcome(s):

Incorporate cultural considerations into disease assessment and nursing care.

Objective(s):

1. Analyze pathophysiologic concepts to interpret clinical signs, symptoms, and diagnostic findings in varied patient populations.
 2. Describe how culture impacts the expanded concept of health and its relation to the process of data collection and assessment.
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Methods of Evaluation:

1. Quizzes
2. Case Studies and
3. Discussion Board Activities
4. Reflection paper

Course Content Outline:

1. Introduction to pathophysiology & cellular adaptation
 - a. Definition of Pathophysiology
 - b. Correlation between altered physiology and common disease development
 - c. Cellular structure and function
 - d. Mechanisms of cellular adaptation
 - i. Atrophy
 - ii. Hypertrophy
 - iii. Hyperplasia
 - iv. Metaplasia
 - v. Dysplasia
 - vi. Cell injury
 - e. Necrosis vs apoptosis
 - f. Clinical implications of cellular dysfunction
 - g. Linking assessment findings to potential disease processes
2. Genetic and epigenetic influences
 - a. DNA structure
 - b. Gene expression
 - c. Patterns of inheritance and mutations
 - d. Epigenetic regulation in a disease
 - e. Common genetic disorders
 - f. Role of genetics in nursing care
3. Immunity and infection
 - a. The Immune system
 - b. Common immune and hematologic cardiovascular disorders
 - i. Key pathophysiologic mechanisms
 - ii. Common infectious agents and host responses
 - iii. Clinical manifestations
 - iv. Correlation of assessment findings and pathophysiology

- c. Advanced topics
 - i. Types I-IV hypersensitivity reactions
 - ii. Autoimmunity
 - iii. Congenital and acquired immunodeficiencies
 - iv. Physical nursing assessment findings
- 4. Alterations of cardiovascular and pulmonary function
 - a. Common Cardiovascular and pulmonary conditions
 - i. Key pathophysiologic mechanisms
 - ii. Clinical Manifestations
 - iii. Risk factors
 - iv. Complications
 - b. Evaluation of diagnostic findings and assessment data
 - i. Determination of functional status and disease progression
 - ii. Correlation of cardiovascular and pulmonary assessment findings with pathophysiology
 - c. Clinical judgement and care planning
- 5. Alterations of Neurological & Endocrine systems
 - a. Common neurological and endocrine conditions
 - i. Key pathophysiologic changes
 - ii. Clinical manifestations
 - iii. Risk factors
 - iv. Complications
 - b. Evaluation of diagnostic findings and assessment data
 - i. Determining functional status and disease progression
 - ii. Correlation of neurological and endocrine assessment findings with pathophysiology
 - c. Clinical judgement and care planning
- 6. Alterations of Gastrointestinal and Renal Systems
 - a. Common gastrointestinal and renal conditions
 - i. Key pathophysiologic changes
 - ii. Clinical manifestations
 - iii. Risk factors
 - iv. Complications
 - b. Evaluation of diagnostic findings and assessment data
 - i. Determining functional status and disease progression
 - ii. Correlation of gastrointestinal and renal assessment findings with pathophysiology
 - c. Clinical judgement and care planning
- 7. Alterations of musculoskeletal and integumentary systems
 - a. Common musculoskeletal and skin conditions
 - i. Key pathophysiologic changes
 - ii. Clinical manifestations
 - iii. Risk factors
 - iv. Complications
 - b. Evaluation of diagnostic findings and assessment data
 - i. Determining functional status and disease progression
 - ii. Correlation of musculoskeletal and integumentary assessment findings with pathophysiology
 - c. Clinical judgement and care planning
- 8. Pathophysiology in practice: integrative reflection and pathophysiology case study analysis
 - a. Analysis of clinical signs, symptoms, and diagnostic findings
 - i. Application of pathophysiologic concepts
 - ii. Identifying disease progressions and potential complications
 - iii. Integrating knowledge and evidence-base resources
 - b. Nursing care planning based on analysis

Religious Accommodation

Before reviewing the course schedule, students should carefully review the following religious accommodation policy and other required instructional policies:

Religious Accommodation:

Students seeking an accommodation for absences permitted under Ohio's Testing Your Faith Act must provide the instructor with written notice of the specific dates for which the student requires an accommodation and must do so not later than fourteen

(14) days after the first day of instruction. Please submit requests for accommodations at this link: [https://portal2.tri-c.edu/ReligiousAccommodation/Religious Accommodation Form](https://portal2.tri-c.edu/ReligiousAccommodation/ReligiousAccommodationForm). Students with questions about their religious accommodations under Ohio's Testing Your Faith Act may contact the College's Office of General Counsel and Legal Services by phone at 216.987.4856 or via email at legal@tri-c.edu.

Other Required Instructional Policies:

<https://www.tri-c.edu/student-resources/curriculum/documents/syllabus-part-b.pdf>

Weekly Schedule

	Topics
Week 1	Introduction to Pathophysiology & Cellular Adaptation
Week 2	Genetic and Epigenetic Influences
Week 3	Immunity & Infection
Week 4	Alterations of Cardiovascular and Pulmonary Function
Week 5	Alterations of Neurological & Endocrine Systems
Week 6	Alterations of Gastrointestinal & Renal Systems
Week 7	Musculoskeletal & Integumentary Systems
Week 8	Pathophysiology in Practice: Integrative Reflection and Pathophysiology Case Study Analysis

The Course Schedule is subject to change due to pedagogical needs, instructor discretion, parts of term, and unexpected events.

Required/Recommended Readings

- *Understanding Pathophysiology*. Huether, McCance, & Brashers.
- *Physical Exam and Health Assessment*. Jarvis & Eckhardt.

Resources for the Instructor

McCance, Huether, & Brashers. *Understanding Pathophysiology*. 8th ed. Elsevier, 2025.

Jarvis & Eckhardt. *Physical Exam and Health Assessment*. 9th ed. Elsevier, 2023.

Huether, McCance, & Brashers. *Evolve Resources for Understanding Pathophysiology*. 8th ed. Elsevier, 2025.

Jarvis & Eckhart. *Evolve Resources for Physical Examination & Health Assessment*. 9th ed. Elsevier, 2023.

Additional Resources for the Instructor

Case studies.

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