

Course Description Form

1. Educational Institution:
Northern Technical University / Nimrud Technical Institute
2. Academic Department:
Department of Therapeutic Nutrition Techniques
3. Course Title:
Pathophysiology
4. Course Code:
TNT115
5. Level / Academic Year:
First / 2025–2026
6. Date of Description Preparation:
21/10/2025
7. Available Attendance Modes:
In-person
8. Total Credit Hours / Units:
30 hours (2 theoretical) × 15 weeks
9. Course Coordinator (All names if multiple):
Name: Mohammed Azeez Mohammed
Email: mmddazz84@ntu.edu.iq
10. Course Objectives:
• To enable the student to understand the basic concepts of pathophysiology. • To enable the student to analyze the mechanisms of cellular adaptation, cell injury, and cell death. • To enable the student to evaluate disorders affecting body fluids, electrolytes, and acid-base balance. • To enable the student to apply the acquired knowledge in pathophysiology to plan preventive and therapeutic programs..
11. Teaching and Learning Strategies:

- Dialogue and discussion strategy.
- Brainstorming.
- Self-learning.
- Assigning collaborative group work.
- Assigning reports.

12.Course Structure:

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theory	1. The student should know the modern concept of disease. 2. The student should recall and understand the function of food and its properties in disease prevention.	Introduction to Pathophysiology • Definition and importance of pathophysiology. • Main components (etiology, pathogenesis, morphological changes, clinical manifestations). • Relationship between food and diseases.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
2	2 Theory	The student should explain the concept of healthy nutrition and its role in disease prevention.	Healthy Nutrition and Disease Prevention • Concept of general healthy nutrition. • Role of nutrition in maintaining homeostasis. • Approach to preventive nutrition.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
3	2 Theory	1. The student should explain and interpret public health strategies. 2. The student should apply public health strategies in disease prevention.	Public Health Strategies and Nutrition • General healthy nutrition strategies. • Applications of public health strategies. • Relationship between health policies and disease prevention.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
4	2 Theory	The student should demonstrate how to assess healthy nutrition and its	Healthy Nutrition Assessment (Part 1)	Presentation, explanation, Q&A, interactive	Daily oral, written, and practical tests, scientific reports

		relationship to disease status.	• Methods of general healthy nutrition assessment. • Biomarkers and clinical signs of nutritional deficiency. • Laboratory tests (albumin, prealbumin).	discussion, self-learning	
5	2 Theory	The student should identify methods of healthy nutrition assessment and link them to pathological disorders.	Healthy Nutrition Assessment (Part 2) • Methods of healthy nutrition assessment (continued). • Nutritional status assessment in chronic diseases. • Interpretation of laboratory test results in the context of disease.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
6	2 Theory	The student should differentiate between nutritional groups at risk in the community.	Nutritional Groups at Risk • Identification of nutritional groups at risk in the community. • Groups most vulnerable to malnutrition (children, pregnant women, elderly). • Relationship between malnutrition and diseases.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
7	2 Theory	The student should identify the assessment plan for nutritional groups at risk.	Assessment Plan for Nutritional Groups at Risk • Assessment plan for nutritional groups at risk. • Design of nutritional assessment questionnaires. • Analysis of nutritional survey data.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports

8	2 Theory	Assessment of student understanding of basic pathophysiology concepts.	Midterm Written Examination	-	Written Examination
9	2 Theory	1. The student should identify food preferences and their relationship to disease status. 2. The student should differentiate between types of factors affecting food.	Food Preferences and Influencing Factors • Food preferences and their types. • Factors affecting food preferences (physiological, psychological, social, cultural). • Relationship between food preferences and chronic diseases.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
10	2 Theory	The student should be acquainted with food safety, its types, and its relationship to disease prevention.	Food Safety (Part 1) • Food safety and its types. • Food safety strategies. • Food safety guidelines. • Relationship between food safety and foodborne diseases.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
11	2 Theory	1. The student should explain food safety. 2. The student should write a report on food safety strategies.	Food Safety (Part 2) • Food safety and its types (continued). • Food safety strategies. • Preparation of food safety reports. • Practical applications in food safety.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
12	2 Theory	Assessment of student understanding of advanced topics.	Written Examination • Review of advanced topics. • Discussion of complex clinical cases.	Presentation, explanation, Q&A, interactive discussion, self-learning	Written Examination
13	2 Theory	The student should identify methods and types of food adulteration and	Food Adulteration • Definition of food adulteration.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports

		their impact on health.	• Types of food adulteration. • Purposes and objectives of food adulteration. • Impact of food adulteration on public health.		
14	2 Theory	1. Clarify the concept of dietary pattern. 2. The student should be acquainted with physical activity and fitness and their relationship to disease prevention.	Dietary Pattern and Physical Activity • Dietary pattern and its types. • Physical activity and fitness. • Relationship between dietary pattern, physical activity, and prevention of chronic diseases.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports
15	2 Theory	Clarify meal planning, its objectives, and types in the context of prevention and treatment.	Meal Planning • Definition of meal planning. • Objectives of meal planning. • Types of meal planning. • Applications of meal planning in prevention and treatment.	Presentation, explanation, Q&A, interactive discussion, self-learning	Daily oral, written, and practical tests, scientific reports

3. Course Evaluation

Grade distribution out of 100 according to the tasks assigned to the student, such as daily preparation, daily oral tests, monthly or written exams, reports, etc

4. Learning and Teaching Resources

Required textbooks (curricular books, if any)	- Porth's Pathophysiology: Concepts of Altered Health States - Carol Mattson Porth - Pathophysiology: The Biologic Basis for Disease in Adults and Children - McCance & Huether - Robbins Basic Pathology - Kumar, Abbas, Aster
Electronic References, Websites	- Porth's Pathophysiology: Concepts of Altered Health States - Carol Mattson Porth - Pathophysiology: The Biologic Basis for Disease in Adults and Children - McCance & Huether - Robbins Basic Pathology - Kumar, Abbas, Aster

رئيس القسم
د. محمد زكريا



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د. داليا عبد الرزاق عبد الله