



T-104  
2022

# Course Specification



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## Course Specification

Course Title:	Pathophysiology
Course Code:	<b>252-PHP-3</b>
Program:	Pharmaceutical Sciences
Department:	<b>Clinical Pharmacy</b>
College:	<b>Pharmacy</b>
Institution:	<b>Najran University</b>
Version:	Course Specification Version Number
Last Revision Date:	17/12/2023

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## A. General information about the course:

Course Identification	
1. Credit hours:	3
2. Course type	
a. University <input type="checkbox"/>	College <input type="checkbox"/> Department <input type="checkbox"/> Track <input type="checkbox"/> Others <input checked="" type="checkbox"/>
b. Required <input checked="" type="checkbox"/>	Elective <input type="checkbox"/>
3. Level/year at which this course is offered:	4 <sup>th</sup> Level/ 2 <sup>nd</sup> year
4. Course general Description This course provides a comprehensive understanding of the underlying pathophysiological mechanisms of major disease states commonly encountered in clinical practice. Students will gain the knowledge and skills to critically interpret clinical signs and symptoms, analyze disease progression, and predict potential drug-disease interactions. This foundation in pathophysiology equips future pharmacists with the essential framework for applying pharmaceutical knowledge to optimize drug therapy and improve patient outcomes.	
5. Pre-requirements for this course (if any): 242 PHL	
6. Co- requirements for this course (if any):	
7. Course Main Objective(s) <ul style="list-style-type: none"> <li>Understand the cellular and molecular basis of disease processes.</li> <li>Analyze the key pathophysiological features of major disease states, including: <ul style="list-style-type: none"> <li>Cardiovascular diseases</li> <li>Respiratory diseases</li> <li>Gastrointestinal diseases</li> <li>Renal diseases</li> <li>Endocrine and metabolic diseases</li> <li>Neurological diseases</li> <li>Infectious diseases</li> <li>Oncological diseases</li> </ul> </li> <li>Identify potential drug-disease interactions and predict their clinical consequences.</li> <li>Explain the rationale behind pharmacotherapeutic interventions in various disease states.</li> <li>Apply pathophysiological knowledge to clinical case studies and problem-solving scenarios.</li> </ul>	

### 1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	45	100

### 2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45



Total

45



## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Demonstrate specialized knowledge and understanding in biomedical sciences.	K1	Lecture	Written exams Assignment
2.0	Skills			
2.1	Integrate clinical sciences with information obtained from different resources to provide accurate recommendations and creative solutions for complex problems.	S1	Lecture Discussion Assignment	Written exams Assignment
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate empathy, professional attitude, ethical and legal behavior, and cultural in relevant practice settings.	V1	Discussion Case Study	Written exams Assignment
3.3	Engage in self-learning practices and inter-professional healthcare education activities.	V3	Discussion Case Study	Written exams Assignment
...				

## C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Pathophysiology: Cells, tissues, organs, systems, homeostasis, disease mechanisms.	4
2.	Cellular and Molecular Pathology: Cell injury, inflammation, immunity, genetic factors, signal transduction pathways.	4
3.	Cardiovascular Disease: Hypertension, coronary artery disease, heart failure, arrhythmias.	5
4.	Respiratory Disease: Asthma, chronic obstructive pulmonary disease, interstitial lung disease, pulmonary embolism.	4
5.	Gastrointestinal Disease: Gastroesophageal reflux disease, peptic ulcer disease, inflammatory bowel disease, liver disease.	4
6.	Renal Disease: Acute kidney injury, chronic kidney disease, glomerular diseases, tubulointerstitial diseases.	4
7.	Endocrine and Metabolic Disease: Diabetes mellitus, thyroid disorders, adrenal disorders, lipid disorders.	4
8.	Neurological Disease: Stroke, Alzheimer's disease, Parkinson's disease, epilepsy, multiple sclerosis.	4
9.	Infectious Disease: Viral, bacterial, fungal, parasitic infections.	4
10.	Oncological Disease: Cancer biology, tumor growth and metastasis, specific cancer types.	4

11.	Drug-Disease Interactions: Mechanisms, pharmacodynamics and pharmacokinetic considerations, clinical impact.	4
Total		45

## D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes	Continuous	15
2.	Midterm Exam	8	25
3.	Assignments	2 - 10	10
4.	Observation card	Continuous	5
5.	Case study Reports	2 - 11	5
6.	Final Exam	15	40

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)



## E. Learning Resources and Facilities

### 1. References and Learning Resources

Essential References	<ul style="list-style-type: none"> <li>Robbins and Cotran Pathologic Basis of Disease</li> <li>Kumar and Clark's Clinical Medicine</li> <li>Lippincott's Illustrated Reviews: Physiology</li> </ul>
Supportive References	
Electronic Materials	Saudi Digital Library, AccessPharmacy, and UpToDate
Other Learning Materials	

### 2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom containing 30 seats.
Technology equipment (projector, smart board, software)	Projector, Smart board
Other equipment (depending on the nature of the specialty)	

## F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching		Indirect Indirect (Questionnaires)
Effectiveness of students assessment		Indirect Indirect (Questionnaires)
Quality of learning resources		Indirect (Questionnaires)
The extent to which CLOs have been achieved		Direct Indirect

**Assessor** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## G. Specification Approval Data

COUNCIL  
/COMMITTEE







REFERENCE NO.

DATE

