



Course Specification

(Bachelor)

Course Title: **Physiology-2**

Course Code: **PHYS 283**

Program: **Pharmaceutical Sciences**

Department: **Pharmacology**

College: **Pharmacy**

Institution: **Najran University**

Version: **Version-1**

Last Revision Date: **21/08/2024**

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A. General information about the course:

1. Course Identification

1. Credit hours: (2 (1+1))

2. Course type

A. ☐ University ☐ College ☐ Department ☐ Track ☒ Program
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (4th level/second year)

4. Course general Description:

Physiology 2 course is a completion for the first course which is delivered to the students in level 3, physiology-1. This course primarily focuses on basic facts in human physiology tailored for pharmacy students which provides the students the basic knowledge about the physiology of renal system, gastrointestinal tract, central nervous system, and endocrine system. This course is delivered in the form of interactive lectures using power point presentation and short videos in addition to the practical sessions.

5. Pre-requirements for this course (if any):

None

6. Co-requisites for this course (if any):

None

7. Course Main Objective(s):

By the end of this course, the student should be able to:

- Recognize the functions of different parts of nephron, the mechanism of urine formation, and importance and disorders of acid base balance.
- Recognize the functions and the regulation of gastrointestinal tract, types of gastrointestinal secretions, GIT motility, process of digestion and absorption
- Describe the organization and the functions of different parts of central nervous system
- Enumerate different functions and describe different disorders of various endocrine glands

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning	-	-
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 	-	-
4	Distance learning	-	-



3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	15
2.	Laboratory/Studio	30
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
Total		45

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

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Students after completion this course will be able to: Recognize the functions of different parts of urinary system, the mechanism of urine formation, and disorders of acid base balance, the functions of GIT, types of GIT secretions, process of digestion, the functions of different parts of CNS, functions and describe different disorders of various endocrine glands	K1	Lectures	Written exams
2.0	Skills			
2.1	Interpret scientific information gained from lectures and practical related to the physiology of urinary system, GIT, CNS and endocrine system	S1	Lectures Laboratory work multimedia instruction	Written exams Assignment Practical Exams
3.0	Values, autonomy, and responsibility			

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
3.1	Demonstrate leadership, skills, in addition to accountability, confidence, and independent thinking to respond to routine or unanticipated circumstances.	V1	Lectures Practice sessions Small group discussion	Observation card

C. Course Content

No	List of Topics (Theory)	Contact Hours
1.	<u>Renal system:</u> The structure, general function of different segments of renal system. The Nephron and the functions of its different segments.	1
2.	Dynamics of glomerular Filtration and Steps of Urine Formation.	1
3.	<u>Digestive system:</u> Functions of GIT (Saliva - stomach - small intestine - large intestine)	1
4.	Functions of (liver- gall bladder - bile salts).	1
5.	GIT disorders (achalasia, reflux esophagitis, peptic ulcer, jaundice, diarrhea, constipation and vomiting).	1
6.	<u>Central nervous system</u> Functions of (Cerebral Cortex, hippocampus, hypothalamus, Cerebellum, medulla oblongata, Basal ganglia,	1
7.	Some important CNS Physiological functions (sleep, learning and memory, Pain, body temperature control, motor control and behavior) and its disorders.	1
8.	<u>Endocrinology:</u> Introduction of endocrine system. Hypothalamus and Anterior pituitary gland.	1
9.	Posterior pituitary gland	1
10.	Thyroid & parathyroid gland	1
11.	Suprarenal gland. Its hormones and its disorders	1
12.	Pancreas gland, Insulin, Glucagon, and Diabetes Mellitus	1
13.	Male reproductive system, hormones and disorders.	1
14.	Female reproductive system, hormones and disorders.	1
15.	Pregnancy, lactation and contraception.	1
Total		15

No	List of Topics (Practical)	Contact Hours
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1.	Urine analysis and its clinical significance	2
2.	Renal function tests	2
3.	Practical of mouth, larynx, esophagus physiology	2
4.	Practical of gastric physiology	2
5.	Liver Function tests	2
6.	Practical of GIT disorders, diarrhea, constipation, vomiting	2
7.	Examination of motor functions and deep reflexes	2
8.	Examination of cognitive functions	2
9.	Examination of pain and other superficial sensations	2
10.	Practical of body temperature control and its assessment	2
11.	Practical of anterior and posterior pituitary disorders	2
12.	Practical of thyroid and parathyroid disorders	2
13.	Practical of suprarenal gland disorders	2
14.	Practical of pancreatic disorders and blood sugar assessment	2
15.	Pregnancy test	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	5 th week	10%
2.	Midterm Exam	8 th week	20 %
3.	Practical Quiz	9 th week	5%
4.	Assignment	14th Week	10%
5.	Students Observation card	Per semester	5%
6.	Final Practical Exam	16 th week	10%
8.	Final Theoretical Exam	17 th week	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	Guyton and Hall Textbook of Medical Physiology, 13th Edition by John E. Hall, Arthur C Guyton Hardcover, 1120 Pages, Published (2016) by Saunders ISBN: 978-4557-7005-2.
Supportive References	Ganong's Review of Medical Physiology, 25th Edition (LANGE Basic Science) 25th Edition by Kim E. Barrett (Author), Susan M. Barman (Author), Scott Boitano (Author), Heddwen Brooks (Author) McGraw-Hill's (2016) ISBN 978-0-07-184897-8.
Electronic Materials	Include: Web Sites, youtube, Blackboard, etc.)





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Other Learning Materials	Other learning material such as computer-based programs/CD, professional standards or regulations and software. Available in the central Library.in Najran university.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. Suitable lecture room equipped with data show and internet and sufficient number of seats. 2. Suitable laboratories equipped with health and safety tools, internet, and enough seats. 3. Blackboard collaborative system for e-learning in NU.
Technology equipment (projector, smart board, software)	1. Data show. 2. Computers with required software 3. Internet and Wifi- access
Other equipment (depending on the nature of the specialty)	Library supplied with reference textbooks, electronic resources

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Head of departments and students	Direct Indirect (Questionnaires)
Effectiveness of Students assessment	Department Faculty members and department council	Direct Direct
Quality of learning resources	Students Department faculty member	Indirect (Questionnaires) Direct
The extent to which CLOs have been achieved	Students	Questionnaires (Indirect)
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	PHARMACOLOGY DEPARTMENT COUNCIL
REFERENCE NO.	14460217-1071-00001
DATE	21/08/2024

