



Jerash University
Faculty of Applied Medical Sciences
Physical Therapy Department



Course Syllabus

Course title:	Electro and hydrotherapy	Course No:	1201220
Course level:	First year	Course prerequisite (s) and/or co-requisite (s):	Introduction of Physical Therapy (1201101) Obligatory
Lecture time:	S-T (11:00-12:00)	Credit hours:	2 Hours

Academic Staff Specifics

<u>Name</u>	<u>Rank</u>	<u>Office Number and location</u>	<u>Office hours</u>	<u>E.mail address</u>
Dr: Rashed ALadwan	Assistant professor	Physical Therapy Department	12:00-13:00	king_20081979@yahoo.com

Course Description

The content of this course provides the student with introduction to electrotherapy in physical therapy, the modalities used in electrotherapy, and the benefits of each one. Also this course provide the students with clear understanding of indication, contraindication, precaution, and side effects of electrotherapy.

Course Objectives

At the end of the course the student should understand the definition and the uses of electrotherapy and hydrotherapy. The students should have a clear differentiation between the types of electrotherapy modalities and the indication, contraindication, and precaution of each type.

This course aims to enable students to develop their knowledge and skills necessary for mastering the application of electrotherapy modalities.

Learning Outcome

Knowledge and understanding, by the end of this course, students should be able to:

- 1) Recognize the electro physical principle.
- 2) Recognize the conduction and transmission of electrical signal, skin anatomy and somatosensory system anatomy.
- 3) Describe the pain gate theory.
- 4) list physiological effects, therapeutic effects, indications, contraindications, dangers and precautions of electrotherapy modalities included in this course.
- 5) Analyze the patient's need to therapeutic electrotherapy interventions.
- 6) Select the most appropriate electrotherapeutic intervention for the patient.
- 7) Discuss the fundamental concepts of electricity as applied in electrotherapy.
- 8) Discuss the indications and contraindications of the various electrotherapeutic devices included in the course.

Cognitive skills (thinking and analysis):

Interactive learning by participating the student into the lectures content.

Communication skills (personal and academic):

Review concept at office hours

Practical and subject specific skills (Transferable Skills):.

Doing homework and simple reports.

Course Outline and Time schedule

Week	Course Outline
First week	Introduction to the physical modalities Thermotherapy
2 nd week	Deep thermal modalities Cryotherapy – ice massage
3 rd week	Basic terminology Electrical circuits in the human body
4 th week	Radiation
5 th week	Electrical stimulation
6 th week	Therapeutic ultrasound
7 th week	Electrical stimulation
8 th week	Transcutaneous Electrical Nerve Stimulation
9 th week	Electrodes Electrode preparation
10 th week	Magnetic Field therapy Effects on organs and systems Application norms
11 th week	Hydro therapy
12 th week	Buoyancy
13 th week	Additional equipment
14 th week	Aquatic and hydrotherapy

Presentation methods and techniques

Methods of teaching varied according to the type of text, student and situation. The following techniques are usually used:

- ❖ Interactive Live **Online** Lectures
- ❖ Cooperative learning.
- ❖ Discussion.
- ❖ Learning by activities.
- ❖ Connecting students with different sources of information

Sources of information and Instructional Aids

- ❖ Computer ... power point ...etc.
- ❖ Transparencies
- ❖ Distance learning
- ❖ Library sources

Assessment Strategy and its tools

The assigned syllabus is assessed and evaluated through: feedback and the skills that are acquired by the students

The tools:

- 1- Diagnostic tests to identify the students level and areas of weakness
- 2- Formal (stage) evaluation
 - a) Mid-term exam
 - b) Class Participation
 - c) Activity file
 - d) Final exam

Tool & Evaluation

The following table clarifies the organization of the assessment schedule:

Test	Grade
Mid-term Exam	30
Activities & Participation	30
Final Exam	40
Total	100

Activities and Instructional Assignment

Practical assignments to achieve the syllabus objectives.

Regulations to maintain the teaching-Learning Process in the Lecture:

- 1- Regular attendance online live lectures.
- 2- Respect of commencement and ending of the lecture time.
- 3- Positive relationship between student and teacher.
- 4- Commitment to present assignments on time.
- 5- High commitment during the lecture to avoid any kind of disturbance and distortion.
- 6- High sense of trust and sincerity when referring to any piece of information and to mention the source.
- 7- The student who absents himself should submit an accepted excuse.
- 8- University relevant regulations should be applied in case the student's behavior is not accepted.
- 9- Allowed Absence percentages is (not exceed 15 %).

References

- ❖ Handbook of electrotherapy for practitioners and student by Burton Baker Grover, 2010
- ❖ Physical Therapy Clinical Handbook for PTAs, 3rd Ed., 2018
- ❖ Text book of electrotherapy by Jagmohan Singh 2017
- ❖ Textbook of Electrotherapy 3rd Ed., 2018