

**Jerash University**

**Faculty of Applied Medical Sciences**

**Physical Therapy Department**

**Course Syllabus**

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| **Course title:** | Electrotherapy | **Course No:** | 1201220 |
| **Course level:** | First year | **Course prerequisite (s) and/or co-requisite (s):** | Introduction of Physical Therapy (1102219)/ Obligatory |
| **Lecture time:** | S-T (11:00-12:00) | **Credit hours:** | 2 Hours |

**Academic Staff Specifics**

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| **Name** | **Rank** | **Office Number and location** | **Office hours** | **E.mail address** |
| Dr: Rashed ALadwan  | Assistant professor | Physical Therapy Department |  12:00-13:00 | king\_20081979@yahoo.com |

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| **Course Description** |

The course is designed to provide the student with introduction to physical therapy methods heat therapy classification of therapeutic methods identifications of electrodes and ultraviolet rays as well as recognition of low-level laser therapy ultrasound therapy electrical stimulation identification of ion sweating and encephalitis magnetic therapy hydrotherapy

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| **Course Objectives**  |

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

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| **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 gait 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.

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| **Course Outline and Time schedule** |

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

**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

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| Sources of information and Instructional Aids |

* Computer … power point …etc.
* Transparencies
* Distance learning
* Library sources

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| **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

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|  **Tool & Evaluation** |

The following table clarifies the organization of the assessment schedule:

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| **Grade** | **Test** |
| 25 | Mid-term Exam |
| 25 | Activities & Participation |
| 50 | Final Exam |
| 100 | Total |

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|  **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 %.).

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| **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