

Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Department of Allied Medical Sciences
Electrotherapy
Semester 200

Course Information	
Course Title	Electrotherapy
Course Code	PT 250
Prerequisites	MED218, MED230a
Course Website	
Instructor	Dr Mahmoud Nazzal
Office Location	M 5, level -4, # 10
Office Phone #	7201000 Ext 23767
Office Hours	by appointment
E-mail	mnazzal2000@hotmail.com
Teaching Assistant	-----
Course Description	
<p>The study of physiological effects and clinical applications of electrical currents, electro stimulation of the muscle and nerve, and electromyography related to neuromuscular function and biofeedback are covered. This course include lecture and laboratory practice.</p>	

Textbook 2	
Title	Electrotherapy: Evidence-Based Practice
Author(s)	Sheila Kitchen
Publisher	Churchill Livingstone
Year	2002
Edition	11 th edition
Book Website	----
Other references	---

Textbook 2	
Title	Therapeutic Modalities for Musculoskeletal Injuries
Author(s)	Denegar, C.R., Saliba, E., & Saliba, S
Publisher	Champaign, IL: Human Kinetics
Year	2005
Edition	2 nd edition
Book Website	----
Other references	----

Assessment		
Assessment	Expected Due Date	Percentage
First Exam	TBA	25 %
Second Exam	TBA	25 %
Final Exam	TBA	30 %
Practical	TBA	20%

Course Objectives	Percentage
1. Have a working knowledge of the inflammatory response to soft tissue and bony injury and inflammatory cardinal signs.	20%
2. Understand different types diathermies and their indication for use.	15%
3. Have a working knowledge of pain perception and the body's analgesic mechanisms.	15%
4. Understand the physical principles of electrical modalities.	15%
5. Understand the physiological response to electrical modalities.	15%
6. Use your understanding of inflammation, pain, and the physical principles and physiological responses to, electrical, diathermies modalities in the safe and effective application.	20%

Teaching & Learning Methods
<ol style="list-style-type: none"> 1. Book. 2. Power point presentations. 3. Practical demonstrations.

Learning Outcomes: Upon successful completion of this course, students will be able to		
Related Objective(s)		Reference(s)
1,3	The student is able to explain the underlying physiological response to deep heat and electrical therapy modalities.	
1, 4, 6	The student is aware of contra-indications, and precautions of deep heat and electrical therapy modalities.	
1,2, 4,5	The student able to select appropriate modality tailored to patient condition.	
2, 6	The student acquires the skills of administration of deep heat and electrical therapy modalities.	

Useful Resources
-University library.
-PubMed (National Library of Medicine) - http://www.ncbi.nlm.nih.gov/PubMed/ .
- htm.ebmmenu/ebm/journals/org.acponline.www/ :http -ine Evidence Based Medic

Course Content		
Week	Topics	Chapter in Textbook (handouts)
1, 2	Physiology of pain	5
3	Effects and use electro therapy equipment.	1,2-4
4,5	Shortwave and Microwave Diathermy	11
6	Ultrasound	14
7	Laser Therapy	12
8,9	Low frequency currents – an introduction	15
10	Transcutaneous Electrical Nerve Stimulation TENS	17
11	Neuromuscular and muscular stimulation	16
12, 13	Intermittent pneumatic compression.	Handout
14	Diagnostic and assessment applications	19