

## **Research Projects for Electrotherapy RHS325**

The main objective of this research project is to enhance the ability of student to read, summarize and analyze research article. This assignment will require that each student find a recent (within the last 10 years) research article (no descriptive or literature review articles) from a peer reviewed journal. The selected article must deal with the effectiveness and/or the clinical application of a modality discussed in class. If you have any questions please **see Professor Taher**. The student will prepare a concisely written summary which includes the rationale, methodology, and results of the study. The student will then provide a critique of the research article and provide some insight as to the clinical relevance and the clinical application of the results

1. **Each student should** submit 2 research articles related to the assigned electro-physical modalities as study in class as list research project (table 1).
2. Each student must check the suitability of the selected articles with Professor Taher before proceeding to conduct his review.
3. All students should complete their project and all materials by weeks 10-12.
4. This project is worth 10 % of your final grade.
5. All group members will receive the same grade for the completed work. (research project)
6. A copy of the article must be attached to the assignment. This assignment must be typed (maximum three typed pages – double spaced, 12 point font, & 1 inch margins).
7. **DO NOT** directly copy **"TEXT" or "PARAGRAPH"** from your handout.
8. **DUE DATE: Sunday Week 10-12**
9. All parts of this project need to be submitted **ONE WEEK** before due date.
10. **Late or incomplete projects will lose 5% point off the final grade (up to a maximum of 30% points) for each week it is handled in late (not including weekend).**

## Contents of Research Projects

### **Part A: Introduction: This part will be complete in (2-3 pages).**

Write a short introduction about your assigned research electro-physical modalities and disease reported in the paper using the following title(S):

- ☐ Introduction about electro-physical modalities reported in research paper
- ☐ Rationale for uses of selected modalities (underline physiological effects)
- ☐ Specific indication/contraindications of selected modalities

### **Part B: Summary and Analysis This part will be complete in (1-2 pages).**

Your mission for part B is to design concisely written brief summary and conclusion which include methodology, and results of the study as following;

- ☐ Describe subjects characteristics and medical conditions as reported in paper
- ☐ Treatment parameters include (Types, Frequency, duration and number of sessions)
- ☐ Describe technique of application and patient application demo
- ☐ Draw conclusion and provide some insight to the clinical relevance and effectiveness of this modalities.

### **General Information to Write the Research Project**

**N.B** It should be initially clarified that the research paper should **not be less than 8 pages** for research project, included references.

#### **Arrangement will be as following;**

1. **Cover Page** (The name of the institution where the research will be undertaken and its address, Title of the research should in English, Name of the student and his/her address and the name of supervisor. Degree that will be obtained (B Sc.), and data of current academic year
2. **Table of Contents**
3. **List of figures (if available)**
4. **List of table**
5. **List of abbreviations (if available)**

#### **Part A– Introduction**

A-1: Introduction about electro-physical modalities reported in research paper

A-3: Rationale for uses of selected modalities (physiological effects)

A-4: Specific contraindications of selected modalities

#### **Part B- Research Paper Summary and Analysis**

**References:** Right reference like the following example

Regan MA, Teasell RW, Wolfe DL, Keast D, Mortenson WB, Aubut JL, for the Spinal Cord Injury Rehabilitation Evidence Research Team. A systematic review of therapeutic interventions for pressure ulcers after spinal cord injury. Arch Phys Med Rehabil 2009;90:213-31.



### **Student's Projects list**

<b>Electrotherapy for pain Management</b>				
	1	2	3	4
<b>Project title</b>	TENS and postoperative pain	TENS and musculoskeletal pain (e.g. Knee Osteoarthritis)	TENS and musculoskeletal pain (e.g. Low back pain)	Interferential and musculoskeletal pain (e.g. low back pain)
<b>Students name (s)</b>	1- 2- 3- 4-	1- 2- 3- 4-	1- 2- 3- 4-	1- 2- 3- 4-
<b>Progresso notes</b>				

### **Student's Projects *list***

	<b>5</b>	<b>6</b>	<b>7</b>
<b>Project title</b>	Neuromuscular electrical nerve stimulation (NMES) of quadriceps muscles following Anterior cruciate ligament reconstruction	Neuromuscular electrical nerve stimulation (NMES) of wrist and hand following stork	Neuromuscular electrical nerve stimulation (NMES) for anterior tabila group following stork
<b>Students name (s)</b>	<b>1-</b>  <b>2-</b>  <b>3-</b>  <b>4-</b>	<b>1-</b>  <b>2-</b>  <b>3-</b>  <b>4-</b>	<b>1-</b>  <b>2-</b>  <b>3-</b>  <b>4-</b>
<b>Progresso notes</b>			

### Student's projects list

	<b>Electrotherapy for edema/wound management</b>		
	8	9	10
<b>Project title</b>	<b>High voltage pulsed current (HVPC) and post-traumatic edema reduction</b>	<b>High voltage pulsed current (HVPC) and wound healing</b>	<b>role of ES in diabetic and pressure ulcer repair</b>
<b>Students name (s)</b>	1-  2-  3-  4-	1-  2-  3-  4-	1-  2-  3-  4-
<b>Progresso notes</b>			

