**University: kafer Elsheik**

**Faculty of Physical Therapy**

**Department of physical therapy for basic science**

**Course Specifications 2015-2016**

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| 1. **Basic Information:** | | |
| Code No.: M 310 | Course Title: pharmacology for physiotherapists | **Academic Level:** 3rd year S2 |
| **Teaching Hours:** Lecture: 2 H/W LAB: --- Total: 2 H/W | | Specialization: Bachelor of Physical Therapy |

**Summary of the main learning outcomes for students enrolled in the course:**

This course introduces the student to basic pharmacology of common drugs used, their importance in the overall treatment including Physiotherapy. The student after completing the course will be able to understand the general principles of drug action and the handling of drugs by the body. The student will be aware of the contribution of both drug and physiotherapy factors in the outcome of treatment.

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| 1. **Aims:**   By successful completion of the course the student should be able to:  1. Describe the basis of drug action including:   * drug development * receptor binding * dose/response relationships * relative measures of drug safety * receptor regulation * drug administration * drug distribution * drug metabolism * drug excretion * the impacts of therapy on a patient’s responses to medications   2. Identify normal autonomic responses to activity and rest and predict altered responses in pathological conditions and with medication  3. Given a case scenario of a patient with a cardiovascular disorder, the student will:   * formulate a hypothesis of expected signs and symptoms * differentiate between pathological responses and those due to medications * describe the basic mechanisms of action and side effects of medications   4. Given a case scenario of a patient with neurological dysfunction, the student will:   * Distinguish between a variety of neurological conditions based on use of all available signs and symptoms, including medications * Predict a patients side effects based on the classes of medications prescribed * Explain the basic mechanisms of action of medications prescribed   5. Given a case scenario of a patient with musculoskeletal dysfunction and/or pain, the student will:   * Describe the basic mechanisms of action and side effects of medications prescribed * Predict how medications taken for pain and inflammation may affect the healing process   6. Discuss the basic endocrine pathologies and the medications used to treat |

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| 1. **Intended Learning Outcomes of the Course (ILOs)** |
| 1. **Knowledge and Understanding:**   By successful completion of the course the student should be able to:  a1. To understand pharmaco-kinetics, pharmaco-dynamics.  a2. Usage of common drugs with (indications, contraindications, side effects).  a3. To understand the drug actions that may affect the physical therapy treatment. |
| 1. **Intellectual Skills:**   By successful completion of the course the student should be able to:  b1- Synthesize information from a number of sources in order to gain a coherent understanding of Pharmacology.  b2- Demonstrate the ability to extract pertinent information through reviewing the provided notes hands outs.  b3- Extract data using information technology, library and appropriate techniques. |
| 1. **Professional and Practical Skills:**   By successful completion of the course the student should be able to:  Apply understanding and operate sound documentation of Pharmacology and how it can help applying efficient different physical therapy intervention procedures. |
| 1. **General and Transferable Skills:**   By successful completion of the course the student should be able to:  d1- Develop a competence in the use of computer based information handling and data processing tools.  d2- Use internet critically as mean of communication and source of information. |

1. **Contents**

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| **Serial No.** | **Topic** | **No. of hours/Week** | | |
| **Theoretical** | **LAB** | **Total** |
| 1st | **Antibiotics:** Definition, choice of agents, resistance, prophylactic groups**,** Very brief introduction of drugs name, mechanism, uses and specific toxicity | 2 | - | 2 |
| 2nd | **Anti inflammatory drugs**: uses, side effects and interaction with physical therapy | 2 | - | 2 |
| 3rd | **Autonomic Nervous System:**   * Brief outline of Sympathetic-parasympathetic nervous system * Therapeutic agents-uses, effects and interaction with physical therapy | 2 | - | 2 |
| 4th | **Central Nervous System:**  Anaesthetic agents- uses, side effects and interaction with physical therapy | 2 | - | 2 |
| 5th | **Central Nervous System (cont.):**  Sedatives and hypnotics - uses, side effects and interaction with physical therapy | 2 | - | 2 |
| 6th | **Central Nervous System (cont.):**  Anti epileptic drugs- uses, side effects and interaction with physical therapy | 2 | - | 2 |
| 7th | **Central Nervous System (cont.):**  Analgesics - uses, side effects and interaction with physical therapy | 2 | - | 2 |
| 8th | **Central Nervous System (cont.):**   * Psychotherapeutic agents- uses, side effects and interaction with physical therapy * Alcoholism and drug dependence and interaction with physical therapy | 2 | - | 2 |
| 9th | **Central Nervous System (cont.):**  Therapeutic agents used for movement disorders- uses, side effects and interaction with physical therapy. | 2 | - | 2 |
| 10th | **Geriatrics:**  Pharmacological challenges in geriatric age group and its effects on physical therapy | 2 | - | 2 |

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| **5– Teaching and Learning Methods**   * Lectures * Assignment. | |
| **6– Teaching and Learning Methods for limited abilities**   * Audio visual demonstration of different clinical situation. * assignments are given to student. | |
| **7- Student Assessment** | |
| **Assessment methods**   * Final written exam. * Mid term exam. * Student activity…etc. | |
| **Assessment Schedule** | |
| **Assessment** | **Week** |
| Final written exam | **13th week** |
| Mid term exam | **7th week** |
| **Weighting of Assessments** | |
| **Assessment** | **Weight** |
| Final written exam | **80%** |
| Mid term exam | **20%** |
| **Total** | 100**%** |
| **8- List of References** | |
| 1. **Course Notes** | | |
| 1. **Essential Books (Text Books)** | | |
| 1. **Recommended Books** | | |
| 1. **Periodicals, Web Sites, … etc** | | |

**Course Coordinator**  **Head of Department**