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| Course Code NURS-216 | Course Title Pharmacology in Nursing | ECTS Credits 5 |
| Prerequisites BIOL-110,NURS-105 | Department Life & Health Sciences | Semester Fall |
| Type of Course Required | Field Nursing | Language of Instruction English |
| Level of Course 1 st Cycle | Lecturer(s) Dr. J. Moutiris | Year of Study 2 nd |
| Mode of Delivery Face-to-face | Work Placement Care settings | Co-requisites None |

Objectives of the Course:

The main objectives of the course are to:

- Transfer to the student the fundamental scientific principles of pharmacology along with the process of pharmacologic reasoning
- Provide the student with an understanding of the cellular mechanisms of drug action and physiologic outcomes (pharmacodynamics); mechanisms of absorption, distribution, metabolism, and excretion of drugs (pharmacokinetics); and the clinical use of drugs in the diagnosis, prevention, and treatment of disease (pharmacotherapeutics).
- Examine the principles of drug administration and documentation, appropriate use, therapeutic effect, toxicity, side effects, therapeutic and toxic interactions, dosages and drug calculations.
- Identify cultural and lifespan considerations with regard to client medications
- Provide the student with the knowledge for a rational pharmacological management of patients with simple and complex health problems.

Learning Outcomes:

After completion of the course students are expected to be able to:

- Define and explain the processes of pharmacodynamics, pharmacokinetics and pharmacotherapeutics.
- Demonstrate knowledge of the basic principles of drug administration and documentation
- Analyze cultural and lifespan aspects that will affect client medication and compliance
- Explore the impact of nursing care strategies in hospitals as well as community settings in containing or disrupting the development of drug resistant pathogens
- Identify the importance of the role of the nurse ensuring patient's compliance and adherence to the pharmacological treatment

- Understand and discuss the importance of scientific enquiry and research findings, regarding development of new pharmacological interventions in the treatment of selected diseases
- Have the knowledge to develop a rational pharmacological plan for patients with simple and complex health problems.

Course Contents:

- Pharmacology within the social and professional context
- Drug administration and professional responsibilities
- General aspects of pharmacology.
- Toxicology
- Autonomic pharmacology
- Chemical mediators
- Modulation of behavior, cognition and motor activity
- Drugs used to relieve pain and produce anesthesia
- Modulation of oxygenation and perfusion
- Modulation of gastrointestinal function
- Modulation of body growth, development and metabolism
- Nutritional and natural therapies
- Modulation of cellular growth and proliferation
- Drugs used topically

Learning Activities and Teaching Methods:

Lectures, Clinical Cases and Assignments

Assessment Methods:

Laboratory Practical Sessions, Tests, Final Examination

Required Textbooks / Reading:

| Title | Author(s) | Publisher | Year | ISBN |
|---|--|------------------------|------------------------------|---------------|
| Fundamentals of Pharmacology – an applied approach for nursing and health | Gallbraith, Bullock, Manias, Hunt and Richards | Pearson, Prentice Hall | 2 nd edition 2007 | 9780131869011 |
| Pharmacology for Nurses: A Pathophysiologic Approach | Adams, Michael Patrick | Pearson Prentice Hall | 2010 | |

Recomended Textbooks / Reading:

| Title | Author(s) | Publisher | Year | ISBN |
|---|------------------|------------------|-------------|-------------------|
| Focus on Nursing Pharmacology, 5th edition | Karch AM | McGraw-Hill | 2011 | 978-0-7817-8982-0 |
| Basic and Clinical Pharmacology, 11th Edition | Katzung Bertram | McGraw Hill | 2009 | 978-0-07-160405-5 |