**Course Description Form**

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| 1. Course Name: |
| Pharmacology for nursing II |
| 2. Course Code: |
| PHR210 |
| 3. Semester: second stage / second semester |
| 2024\2025 |
| 4. Description Preparation Date: |
| 30\1\2025 |
| 5. Available Attendance Forms: |
| Attendance |
| 6. Number of Credit Hours (Total) / Number of Units (Total) |
| Theory: 30 hours, 2 units |
| 7. Course administrator's name (mention all, if more than one name) |
| Name: Maysam Ali Ameen Awadh<br>Email : maysamawadh2@gmail.com |

| 8. Course Objectives | |
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| Course Objectives | **First: Cognitive Objectives**<br>By the end of this course, the nursing student will be able to:<br>1. Understanding the basic principles of pharmacology, including pharmacokinetics and pharmacodynamics.<br>2. Identifying the main drug categories used in the treatment of common diseases and their role in nursing care.<br>3. Understanding the effect of drugs on different body systems and how the patient's physiological condition affects the drug's efficacy.<br>4. Distinguishing adverse drug reactions (ADRs) and drug interactions with other medications or food. |

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| | 5. Analysis of individual factors that affect patients' responses to medications, such as age, gender, chronic diseases, and genetic differences.<br>6. Familiarizing oneself with the laws and regulations regarding medication management in various healthcare settings.<br>7. Recognizing the signs and symptoms of an overdose or drug poisoning and taking appropriate nursing actions.<br><br>**Secondly: Skill-based Objectives**<br>By the end of this course, the nursing student will be able to:<br><br>1. Applying the principles of medication safety in administering drugs according to the approved nursing protocols.<br>2. Administering medications safely through various routes (oral, intravenous, intramuscular, subcutaneous, etc.) according to proper nursing procedures.<br>3. Calculating medication doses accurately using appropriate pharmaceutical calculations according to the patient's condition.<br>4. Monitoring patients' responses to medications and reporting any unexpected side effects or complications.<br>5. Providing health education to patients about the use of medications, including correct dosages, side effects, and potential interactions.<br>6. Implementing medication documentation procedures accurately, including recording administered medications, potential interactions, and the patient's response to treatment.<br>7. Dealing with pharmaceutical emergencies such as anaphylaxis and drug poisoning, using first aid and appropriate nursing procedures.<br>8. Using drug information systems such as electronic medical records (EMR) and modern applications to update drug information. |
| 9. Teaching and Learning Strategies | |
| **Strategy** | **Lectures**: To present basic information and theoretical concepts.<br>**Group discussions**: To enhance critical thinking and effective participation among students.<br>**Teamwork**: To develop collaboration skills and the practical application of concepts.<br><br>**Evaluation methods:**<br>**Written tests**: to measure the theoretical understanding of concepts and terms.<br>**Practical assessment (applied skills):** through case studies or the execution of practical activities.<br>**Participation in group discussions:** to assess the level of interaction and critical understanding.<br>**Brainstorming** |

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| | **Reports**<br>**Quis** |

10. Course Structure

| No. | Hours | Required Learn Outcomes | Unit or subject name | Learning method | Evaluation method |
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| **First week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Drug therapy across the life span:**<br>• **Drug therapy during pregnancy and breast feeding.**<br>• **Drug therapy for pediatric patients.**<br>• **Drug therapy for Geriatric patients** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Second week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Administration of Medications:**<br>• **Preventing medication errors.**<br>• **Medication systems.**<br>• **Medication orders.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Third week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | • **Drug preparations and dosage forms.**<br>• **Routes of drug administration.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Fourth week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Drugs used in the treatment of Dyslipidemia:**<br>• **Role of LDL-cholesterol in atherosclerosis.**<br>• **Lipid lowering drugs.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Fifth weeks** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Anti-coagulant, anti-platelet and Thrombolytic Drugs:**<br>• **Overview of drugs used to treat thrombi-embolic disorders.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |

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| **Sixth week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | • **Parenteral anti-coagulants, Oral anti-coagulants, anti-platelet drugs.**<br>• **Thrombolytic drugs.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **seventh week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Drugs used for Deficiency Anemia**<br>• **deficiency.**<br>• **Vitamin B12 deficiency.**<br>• **Folic acid deficiency.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Ninth week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Antibiotics introduction Antibiotic classification** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Tenth week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Antibiotics first group second group** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Eleventh weeks** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Antibiotics first group second group** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **Twelfth week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Respiratory system - diseases affecting the respiratory system receptors present medicines that act on the respiratory system, mechanism of action** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |
| **thirteenth week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Anesthesia medications Hypnotic medications Epilepsy medications** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments. | Quiz |

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| **Fourteenth Week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Anesthesia medications**<br>**Hypnotic medications**<br>**Epilepsy medications** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments | Quiz |
| **Fifteenth Week** | 2 hours | Presentation of a series of discrete slides using the whiteboard | **Administration of Medications:**<br>• **Preventing medication errors.**<br>• **Medication systems.**<br>• **Medication orders.**<br>• **Drug preparations and dosage forms.**<br>• **Routes of drug administration.** | Lectures, group discussion, seminars, clinical training, brain storming, and assignments | Quiz |

| 11. Course Evaluation | |
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| The grade of the semester (100) is distributed as follows<br>The presence score 5%<br>Daily Test Score 5%<br>Mid exam score 20%<br>Final exam score 70% | |
| **12 Learning and Teaching Resources** | |
| **Required textbooks (methodology, if any)** | |
| Key references (sources) | **Brunton, L. L., Knollmann, B. C., & Hilal-Dandan, R. (2022). *Goodman & Gilman's: The pharmacological basis of therapeutics* (14th ed.). McGraw-Hill Education.**<br><br>***Katzung, B. G., Vanderah, T. W., & Trevor, A. J. (2021). Basic and clinical pharmacology (15th ed.). McGraw-Hill Education.***<br><br>• **Scientific Journals:**<br><br>1. *British Journal of Pharmacology* – Published by Wiley.<br>2. *Journal of Pharmacology and Experimental Therapeutics* – Published by ASPET.<br>3. *Clinical Pharmacology & Therapeutics* – Published by Wiley.<br>4. *European Journal of Pharmacology* – Published by Elsevier.<br>5. *The Lancet – Pharmacology Section* – Published by Elsevier. |
| Recommended books and references (scientific journals, reports...) | ***Rang, H. P., Dale, M. M., Ritter, J. M., Flower, R. J., & Henderson, G. (2019). Rang & Dale's pharmacology (9th ed.). Elsevier.***<br><br>***Brenner, G. M., & Stevens, C. W. (2018). Pharmacology (6th ed.). Elsevier.*** |
| Electronic references, websites | 1. **PubMed** - Medical and Pharmaceutical Research Database. www.pubmed.ncbi.nlm.nih.gov<br>2. **National Center for Biotechnology Information (NCBI)** - www.ncbi.nlm.nih.gov |

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| | 3. **World Health Organization (WHO) – Essential Medicines List** - www.who.int<br>4. **U.S. Food and Drug Administration (FDA)** - www.fda.gov<br>5. **Medscape Pharmacology** - www.medscape.com<br>6. **Drugs.com** - Reliable pharmaceutical encyclopedia. www.drugs.com<br>7. **American Society for Pharmacology and Experimental Therapeutics (ASPET)** - |
| Course Development Plan | · **Updating scientific content**:<br>Review and update new medications and add advanced pharmacological concepts.<br>Reliance on modern clinical practice guidelines (Clinical Guidelines).<br>· **Introducing interactive educational tools:**<br>Designing interactive activities, such as instant online quizzes and pharmaceutical simulation games.<br>Using virtual reality (VR) to simulate the effect of drugs inside the body.<br>Improving evaluation and performance measurement:<br>Creating tests based on clinical cases instead of just theoretical questions.<br>Application of the Objective Structured Clinical Examination (OSCE).<br>· **Practical and applied training**:<br>Providing opportunities for field training in hospitals and clinical pharmacies.<br>Presenting mini research projects for students on new drugs or recent drug effects. |