



## The University of Jordan

Faculty: Faculty of pharmacy

Department: Department of Biopharmaceutics and Clinical pharmacy

Program: Pharm D

Academic Year/ Semester: Spring 2014/2015

Course Name (Course Number): Pharmacy Practice 2 (1203406)

|                          |   |               |                        |               |                               |
|--------------------------|---|---------------|------------------------|---------------|-------------------------------|
| Credit hours             | 2 hours   | Level         | 4th year               | Pre-requisite | Pharmacy Practice I (1203405) |
| Coordinator/<br>Lecturer | Rana Abu Farha  | Office number | 206                    | Office phone  | 23341                         |
| Course website           | <a href="http://elearning.ju.edu.jo/course/view.php?id=4786">http://elearning.ju.edu.jo/course/view.php?id=4786</a> | E-mail        | ranaabufarha@ju.edu.jo | Place         | JPM class room                |

| Office hours |        |        |         |           |          |
|--------------|--------|--------|---------|-----------|----------|
| Day/Time     | Sunday | Monday | Tuesday | Wednesday | Thursday |
|              | 2-3    | 2-3    | 2-3     | 2-3       | 2-3      |
|              |        |        |         |           |          |

### Course Description

This course introduces you to your professional responsibilities as pharmacists. The course is intended to provide you with a systematic approach to patient-centered pharmaceutical care that will be applied and practiced throughout the curriculum.

### Learning Objectives

1. Develop a complete medical problem list.
2. Assess medical problems, and evaluate the appropriateness of treatment of each problem.
  - A. Determine the etiology, status, status, and severity of the medical problem.
  - B. Assess the appropriateness of treatment of each medical problem (e.g., is treatment not being addressed (undertreatment), is the best drug being used based on the principles of evidence-based medicine, what are the risks vs. benefits of treatment of a particular medical problem, is the drug therapy causing harm).

**3. Evaluate an individual's drug therapy regimen:**

- A. Consider such factors as efficacy and effectiveness, adverse effects, patient values, cost, and ability to adhere to recommendations.**
- B. Apply criteria for determining medication appropriateness.**
- C. Apply the criteria for identifying drug-related problems.**

**4. Select, recommend, and implement appropriate drug therapy and other non-pharmacologic modes of therapy (e.g., diet, exercise) to prevent and treat medical problems, and provide a rationale/justification for your recommendations.**

- A. Discuss efficacy (best research evidence) and adverse effects of the recommended drug therapy; select the most appropriate therapy based on the principles of evidence-based medicine (i.e., best research evidence, clinical expertise, patient values).**
- B. Recognize whether the choice or dose of drug will be affected by other patient diseases or problems.**
- C. Determine whether any clinically significant drug interactions are likely to occur during therapy for multiple problems.**
- D. Consider pharmacokinetic and pharmacodynamic properties in selecting the most appropriate therapy for a particular patient.**
- E. Consider drug administration or select the next best alternative if therapy fails based on the therapeutic goal.**
- F. Always consider patient values, cost, and ability to adhere to recommendations.**

**5. Monitor for both efficacy and adverse effects of drug therapy.**

- A. Determine an overall therapeutic goal when a particular problem is to be treated; establish a therapeutic goal for each form of therapy.**
- B. List monitoring parameters that will determine whether goals are being met.**
- C. Identify the common and/or significant adverse reactions for each drug selected, and identify the parameters necessary to monitor for drug toxicity.**

**6. Continually evaluate drug therapy and the outcomes of an implemented pharmacotherapeutic plan. Assess effectiveness, adverse effects, and benefits of drug therapy. Decide to discontinue, conclude, continue, or revise the pharmacotherapeutic plan.**

**7. Communicate recommendations and plan to patients (and/or others involved in the care), physicians, and other members of the health care team.**

**8. Document recommendations and interventions.**

**Intended Learning Outcomes (ILOs):**

Successful completion of the course should lead to the following outcomes:

**A. Knowledge and Understanding: Student is expected to**

- A1. Understand different types of DRPs.
- A2. To have better understandings on adverse drug reactions and pharmacovigilance system.
- A3- To have better understandings of drug-drug interactions.

**B. Intellectual Analytical and Cognitive Skills: Student is expected to**

- B1- Classify drug therapy problems according to their appropriate interventions.
- B2- Communicate recommendations and plan to patients

**C. Subject-Specific Skills: Student is expected to**

- C1-Assess medical problems, and evaluate the appropriateness of treatment of each problem.
- C2- Evaluate an individual's drug therapy regimen
- C3- Select, recommend, and implement appropriate drug therapy and other non-pharmacologic modes of therapy (e.g., diet, exercise) to prevent and treat medical problems, and provide a rationale/justification for your recommendations.
- C4- Continually evaluate drug therapy and the outcomes of an implemented pharmacotherapeutic plan

**ILOs: Learning and Evaluation Methods**

| ILO/s | Learning Methods  | Evaluation Methods                                     |
|-------|---|--|
| All   | Lectures and Discussions,<br>Homework and Assignments,<br>Projects, Presentation, ... | Exam, Quiz, presentation,<br>project, assignments, ... |

## Course Contents

| Content  | Reference | Week       | ILO/s            |
|--|-----------|------------|------------------|
| Pharmaceutical care data base (revision)                           | ----      | Week 1     | ----             |
| Step 2 The Assessment of drug related needs                        | ----      | Week 2, 3  | C2               |
| Drug related problems classification systems                       | ----      | Week 3, 4  | A1               |
| <b>Quiz 1 (10 marks)</b>   | ----      | Week 4     | <b>12-3-2014</b> |
| Step 3 Identification of Drug related Problems                     | ----      | Week 5, 6  | B1               |
| <b>Workshop: Classification of Drug related Problems (5 marks)</b> | ----      | Week 7     | <b>31-3-2014</b> |
| Adverse drug reactions   | ----      | Week 7     | A2               |
| Pharmacovigilance  | ----      | Week 8     | A2               |
| Midterm Exam (30 marks)  | ----      | Week 8     | -----            |
| Drug-Drug interactions   | ----      | Week 9, 10 | A3               |
| <b>Case studies on drug -drug interactions(5 marks)</b>            | ----      | Week 10    | <b>23-4-2014</b> |
| Step 4 Pharmacy Care Plan  | ----      | Week 11    | C1               |
| Identifying pharmacotherapeutic Goals                              | ----      | Week 11    | C3               |
| Interventions  | ----      | Week 12    | C1               |
| Follow up evaluation plan  | ----      | Week 12    | C4               |
| Documentation and Consult Notes                                    | ----      | Week 13    | B2               |
| Step 5 Monitoring and follow up process                            |           | Week 14    | C4               |

### Learning Methodology

Teaching methods will include lectures, workshops and case studies.

### Workshops

1. Classification of Drug related Problems
2. Case studies on drug -drug interactions

### Evaluation

| Evaluation   | Point % | Date      |
|--------------|---------|-----------|
| Midterm Exam | 30 %    | ----      |
| Quiz         | 10 %    | 12-3-2014 |
| Workshop1    | 5 %     | 31-3-2014 |
| Workshop1    | 5 %     | 23-4-2014 |
| Final Exam   | 50%     | ----      |

### Main Reference/s:

1. **Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services (3rd edition)** Cipolle, RJ, Strand, LM, & Morley, PC, McGraw-Hill, 2012. ISBN-13: 978-0071756389
2. **Langely CA, Belcher D. Applied Pharmaceutical Practice. 1st ed. 2008. Pharmaceutical Press. London. 2009. ISBN 978 0 85369 746 6**
3. **Medication Therapy Management: A Comprehensive Approach. David M. Angaran, Karen Whalen. 2015. ISBN: 978-0-07-184869-5**
4. **Community and Clinical Pharmacy Services: A Step-by-Step Approach. Ashley W. Ellis, Justin J. Sherman. 2013. ISBN 978-0-07-176375-2**
5. **Communication Skills in Pharmacy Practice: A Practical Guide for Students and Practitioners. Robert S. Beardsley, Carole L. Kimberlin, William N. Tindall. 2011. SBN-13: 978-1608316021**