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.

Primary Course Outcomes

1. Identify the sources for and collect the essential elements of a pharmaceutical care database.

2. Apply the principles of patient-centered evidence-based medicine in the provision of pharmaceutical care.

3. Communicate effectively with patients, physicians, and other health care professionals. (This includes both oral and written communication).

Course Objectives

Based upon the principles and concepts presented in lectures, case-based discussions, assignments, recitations, and readings, you should be able to:

1. Demonstrate an understanding of the principles of pharmaceutical care
2. Collect information from appropriate sources in order to evaluate drug therapy, develop medical problem lists, assess medical problems, and select and recommend appropriate therapy.
3. Recognize and interpret symptoms (e.g., chief complain, ROS), and/or signs (e.g., physical exam findings, laboratory values) to aid in the identification and assessment of medical problems. Determine whether these findings warrant an intervention or require pharmacotherapy, alter the selection and/or dosing regimen of drugs, or may be caused by or worsened by pharmacotherapy.

4. Develop a complete medical problem list.

5. 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).

6. Evaluate an individual's drug therapy regimen based on the principles of evidence-based medicine.
   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.

7. Select, recommend, and implement appropriate drug therapy and other nonpharmacologic 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.

8. 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.

9. 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.

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


Teaching methods:

Teaching methods will include lectures, workshops, seminars, videos, software, and case studies

References

3. Other references as recommended
### Lectures:

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• ASHP statement on pharmaceutical care  
• ASHP guidelines on a standardized method for pharmaceutical care  
• Clinical Pharmacy Defined |
| 4              |       | The need for Pharmaceutical care: Drug related morbidity and mortality, results from Jordan and around the world | Chapter 2  
Pharmacists can make a difference  
Barriers to pharmaceutical care |
| 5              |       | Pharmacology, Pharmacokinetics, Pharmacotherapy | Chapter 3  
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Interpretation of Laboratory data |
| 6              | Self reading | Introduction to medical terminology | Self reading two parts  
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