



Jordan University of Science and Technology
Faculty of Pharmacy
Pharmacy Department

PHAR741 Pharmacoeconomics (1) - JNQF Level: 9
First Semester 2024-2025

Course Catalog
2 Credit Hours. This course introduces the role of health economics in healthcare system. The course explains fundamentals of core theories underpinning health economics, it aims to stimulate students' critical thinking about the major challenges within health care systems and how health economics can play a role in understanding and mitigating those challenges. The course incorporates a combination of the core theory underpinning health economics and empirical research within health
Teaching Method: On Campus

Text Book	
Title	Essentials of Pharmacoeconomics: Health Economics and Outcomes Research
Author(s)	Karen Rascati
Edition	3rd Edition
Short Name	Ref #1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Pharmacoeconomics: From Theory to Practice	Renee J.G. Arnold	2nd Edition	

Instructor	
Name	Dr. Samah Al-Shatnawi
Office Location	M5 L-4
Office Hours	Sun : 08:30 - 09:30 Mon : 09:30 - 11:30 Tue : 10:30 - 11:30 Wed : 08:30 - 10:30
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Class Schedule & Room
Section 2: Lecture Time: Sun, Thu : 09:30 - 10:30 Room: M3303

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Basic economic concepts (GDP, GDP growth cycle) Basic concepts of Supply and Demand	From Ref #1
Weeks 2, 3	Overview of HE and PE 1) Introduction to Health economics 2) Health Economics and the applications of Pharmacoeconomics 3) The importance of Pharmacoeconomics within healthcare system 4) Clinical Relevancy of HE and PE 5) Measuring health-related quality of life and psychometric properties of HRQoL tools	From Ref #1, From Ref #2
Weeks 4, 5	Overview of healthcare costing 1) Introduction to ?Measuring and Estimating Healthcare Costs? i. Categorizing different types of healthcare costs ii. HE and PE perspectives of a study based on costs? types 2) Approaches to Costing i. Micro-Costing (Bottom-Up) ii. Standard Costing (Top Down) iii. Methods of standard costing iv. Appropriateness of selected costing methods 3) Cost Value i. Determine how costs are valued ii. Adjusting for timing iii. Calculating net present value (Discounting)- definition and applications 4) Discounting as policy	From Ref #1, From Ref #2
Week 6	Cost-minimization analysis (CMA) 1) Define and describe cost-minimization analysis 2) Advantages and disadvantages of CMA 3) Examples of CMA / article	From Ref #1, From Ref #2
Weeks 7, 8	Cost-effectiveness analysis (CEA) 1) Methods of presenting cost-effectiveness results 2) Cost effectiveness threshold 3) Cost-effectiveness grid and Cost- effectiveness plane 4) Compare intermediate- with final-outcome measurements 5) Sensitivity analysis & cost-effectiveness acceptability curve 6) Examples on CEA / article	From Ref #1, From Ref #2

Weeks 9, 10	Cost-utility analysis (CUA) 1) Define and describe cost-utility analysis (CUA) 2) Address advantages and disadvantages of CUA 3) Steps in measuring and calculating utility-based outcomes 4) Compare the different methods used in estimating utilities 5) Compute quality-adjusted life-year (QALY) calculations. 6) Examples of CUA / article	From Ref #1, From Ref #2
Weeks 11, 12	Cost-benefit analysis (CBA) 1) Define and describe cost-benefit analysis (CBA) 2) Address the advantages and disadvantages of CBA 3) Methods of measuring productivity and intangible costs, including the human capital (HC) and the willingness-to-pay (WTP) approaches 4) Calculation methods used with CBA: net benefits (or net costs), benefit-to-cost (or cost-to-benefit) ratios, and internal rate of return (IRR) 5) Example of CBA / article	From Ref #1, From Ref #2
Week 13	Project Presentations	
Weeks 14, 15	Worldwide pharmacoeconomic guidelines	From Ref #1, From Ref #2
Week 16	Topic Discussions	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Describe the main concepts of HE, PE costing methods and cost value. [1PLO-PE1.1] [1L9K1]	50%	
Design a pharmacoeconomic study with the most appropriate design and data relevant to a particular research question. [1PLO-PE2.1] [1L9S1]	30%	
Apply the needed steps in recommending advice to assist in making decision of selected research question [1PLO-BE3.2] [1L9C3]	20%	

PLO1.1	PLO2.1	PLO3.2	PLO3.3	PLO2.2	PLO2.3	PLO2.4	PLO3.1	PLO3.4	PLO3.5	PLO3.6	PLO4.1	PLO4.2	PLO4.3	PLO4.4	PLO5.1	PLO-PT1.1	PLO-PT2.1	PLO-PT2.2	PLO-PT3.1

Relationship to NQF Outcomes (Out of 100%)		
L9K1	L9S1	L9C3
50	30	20

Evaluation	
Assessment Tool	Weight
Midterm exam	30%
Class project	15%
Project presentation	5%
Final exam	50%

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