

Introduction to Pharmacoeconomics Course Syllabus

Course title: Introduction to Pharmacoeconomics

Course code: Phar 3142

Course EtCTS: 5

Course Hours: 135hours (5 EtCTS x 27)

- Lecture: 48
- Project work: 14 hours
- Presentations=14
- Tutorial: 13 hours
- Home study: 36 hours
- Assessment=10 hours

Pre-requisite if any: Successful completion of the previous modules

Course Description:

- This introductory course in pharmacoeconomics is designed to prepare graduate pharmacists who can competently involve in pharmacoeconomic decision making. Students will be able to describe and use different methods of pharmacoeconomic evaluation and effectively analyze and evaluate different pharmacoeconomic studies. This course also introduces students with the basic concepts in economics.

Course Objective:

- After completion of this course students will be able to describe the different methods of pharmacoeconomic analysis and evaluate pharmacoeconomic studies and effectively use them for decision making.

Supporting objectives: To meet this objective, students will:

- ❖ Define economics
- ❖ List the different principles of economics
- ❖ Explain Demand, Supply and Equilibrium
- ❖ Define pharmacoeconomics
- ❖ Identify measures of direct and indirect costs based on data on charges, expenditures, and treatment algorithms
- ❖ Determine and use standard costs in economic evaluations.

- ❖ Discount costs and benefits appropriately.
- ❖ Describe pharmacoeconomics analytical models.
- ❖ Discuss the importance of specification/selection of perspectives to be included in the analysis.
- ❖ Identify the strengths and weaknesses of different evaluation designs(cost-effectiveness/cost-utility/costbenefit/costminimization).
- ❖ Identify measures of outcomes and understand the appropriate use of HRQOL, QALY, and utility measures.
- ❖ Discuss the difference between efficacy and effectiveness data.
- ❖ Discuss the implications of choice of endpoints for the analysis, including the use of (a) intermediate outcomes measures, (b) utilities and quality of life measures, (c) projected final outcomes based on trial data, and (d) summary of findings by meta-analysis.
- ❖ Understand sensitivity analysis, including choice of variables and one- and two-way analysis.
- ❖ Critique current Pharmacoeconomics literature.
- ❖ Describe the rationale and importance of pharmacoeconomic (PE) analyses.

Week	Contact hrs	Topic/sub-topic/chapter	Reading materials	Remar k
1	4	1. Introduction to Principles of Economics 1.1 Definition of economics and economy, value, worth and utility;	Reference 1,2 & 3	
2	4	1.2 Demand, Supply and Equilibrium;	Reference 1,2 & 3	
3	4	1.3 The market: Setting a price, Free and Regulated Markets, Market Failure 1.4 Society and Scarce Resources	Reference 1,2 & 3	
4	4	2. Introduction to Pharmacoeconomics 2.1 Definition and Importance of Pharmacoeconomic studies 2.2 Introduction to pharmacoeconomic analysis 2.3 Health Care and Market Failure	Reference 1,2 & 4	
5	4	3. Decision Analysis and Pharmacoeconomic Evaluations 3.1. Basic Concepts of Probability	Reference 1,2 & 3	

		3.2. Definition and Theoretical Basis of Decision Analysis in Health	
6	4	3.3 The Basic Steps of Decision Analysis	Reference 1,2 & 3
		3.4 Evaluation of the Result of Decision Analysis	
7	4	3.5 Possible Benefits and Common Criticisms of Decision Analysis in Health	Reference 1,2 & 3
		4. Costs and Time Preference.	
		4.1. Types of Intervention Cost Studies	
		4.2. Collection and Types of Costs	
8	4	4.3 Discounting of Costs	Reference 1,2 & 3
		4.4 Adjusting for Inflation and Annuitizing Capital Expenditures	
9	4	5. Cost Benefit Analysis (6hrs)	Reference 1,2 & 3
		5.1. Introduction to CBA	
		5.2. Steps in Conducting CBA	
10	4	5.3 Group discussions and Exercises about CBA	Reference 1,2 & 3
		6. Cost Effectiveness Analysis	
		6.1. Introduction to CEA	
11	4	6.2 Principles of CEA	Reference 1,2 & 3
		6.3 Conducting CEA	
12	4	6.4 Group Discussions and Exercises about CEA	Reference 1,2 & 3
		7. Cost Utility Analysis	
		7.1. Introduction to CUA	
13	4	7.2. QALY and DALY	Reference 1,2 & 3
		7.3. Measuring QALY and DALY	
14	4	7.4 Conducting Cost Utility Analysis	Reference 1,2 & 3
		8. Miscellaneous Topics	
		8.1. Markov Models of Chronic Conditions	
15	4	8.2. Screening and Pharmacoeconomics	Reference 1,2 & 3
		8.3. Assessing Articles and Critique of Pharmacoeconomic Evaluation	
16	4	WHOLE COURSE SUMMARY	

Mode of delivery:

This course is thought using a variety of instructional methods including

- Illustrated Lectures and case studies
- Active learning methods (brain storming, buzz group, discussion, etc)
- Individual and group exercises and assignments
- Presentations and participation in class discussion

Mode of Assessment:

Continuous assessment & summative assessment

- quizzes: 15%
- Test:15%
- journal club presentation:10% Case studies:10%
- Assignments (group or individual):15%
- Written final exam: 35%

LEARNING MATERIALS:

- Recommended Readings:
 1. Bootman JL, Townsend RJ, McGhan WF (2002). Principles of Pharmacoeconomics, 2nd ed. or later edition, Harvey Whitney Books Company, United States of America.
 2. Haddix AC, Teutsch SM, Shaffer PA, Dunet DO (1996 or later edition). Prevention Effectiveness: A Guide to Decision Analysis and Economic Evaluation, Oxford University Press Inc, New York.
 3. Drummond MF, Bernie O, Stoddard GL, Torrance GW (1997). Methods for the Economic Evaluation of Health Care Programs, 2nd ed. or latter edition, Oxford University Press Inc, New York.
 4. On line Lecture Notes – the Economics of Health Care: <http://www.oheschools.org/> produced by the UK Office of Health Economics.