

Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E
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Study Plan No.	2021-2022	University Specialization	Bachelor of Pharmacy
Course No.	0201523	Course Name	Pharmacoeconomics
Credit Hours	2	Prerequisite *Co-requisite	Therapeutics 1
Course Type	☐ Mandatory University Requirement ☐ University Elective Requirement	☐ Faculty Mandatory Requirement ☐ Support course family requirements	☒ Mandatory Requirement ☐ Elective Requirement
Teaching Style	☐ Full Online Learning	☒ Blended Learning	☐ Traditional Learning
Teaching Model	☐ 1 Synchronous: 1 Asynchronous	☒ 2 Face to Face: 1 Synchronous	☐ 3 Traditional

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)					
Name	Academic rank	Office No.	Phone No.	E-mail	
Office Hours (Days/Time)					
Division number	Time	Place	Number of Students	Teaching Style	Approved Model
				Blended Learning	2 Face to Face: 1 Synchronous

Brief Description

The purpose of this course is to provide a theoretical foundation and basic methods of application in health technology assessment in general and pharmacoeconomic methods for health care programs.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	Drummond MF, Sculpher MJ, Claxton K, Stoddart GL, Torrance GW. Methods for the Economic Evaluation of Health Care Programmes. Fourth Edition. Cambridge: Oxford University Press. 2015.
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	1. Alkhatib et al. Six delta platform, Journal of medical economics 2. A. D. P. Briggs, Karl Claxton, and Mark Sculpher. Decision modelling for health economic evaluation.
Supporting Websites	
The Physical Environment for Teaching	☒ Classroom ☐ Labs ☒ Virtual Educational Platform ☐ Others
Necessary Equipment and Software	- Moodle.
Supporting People with Special Needs	
For Technical Support	E-Learning & Open Educational Resources Center. Email: ellearning@zuj.edu.jo ; Phone: +962 6 429 1511 ext. 425/362.

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Course learning outcomes (K= Knowledge, S= Skills, C= Competencies)

No.	Course Learning Outcomes	The Associated Program Learning Output Code
Knowledge		
The student should be able to:		
K1	Explain the economic constructs of health and illness.	MK3
K2	Identify various types of health care costs and sources.	MK3
K3	Differentiate between the types of pharmacoeconomic evaluations.	MK3
Skills		
The student should be able to:		
S1	Calculate incremental cost-effectiveness ratio and cost-utility ratio.	MS3
S2	Perform discounting calculations.	MS3
S3	Perform critical appraisal to economic evaluations.	MS2
Competencies		
C1	Educate patients and health care providers and payers.	MC2
C2	Inform decision making about cost-effective regimens in drug formulary.	MC1

Mechanisms for Direct Evaluation of Learning Outcomes

Type of Assessment / Learning Style	Fully Electronic Learning	Blended Learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
First Exam	0	0	%20	0
Second / Midterm Exam	%30	30%	%20	30%
Participation / Practical Applications	0	0	10	30%
Asynchronous Interactive Activities	%30	30%	0	0
Final Exam	%40	40%	%50	40%

Note: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Schedule of Simultaneous / Face-to-Face Encounters and their Topics

Week	Subject	Learning Style*	Reference **
1	L1- Introduction to Pharmacoeconomics (history and rationale)	F2F	Drummond
2	L2-Type of costs	F2F	Drummond
3	L3-Types of clinical evidence	F2F	Drummond
4	L4-Decision analysis	F2F	Briggs
5	L5-Cost-effectiveness analysis	F2F	Drummond
6	L6-Cost-utility analysis	F2F	Drummond
7	L7-Cost-minimization and cost benefit	F2F	Drummond

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8	L8-Estimating utility values	F2F	Drummond
9	L9-Budget Impact Analysis	F2F	Drummond
10	L10-Discounting and inflation	F2F	Drummond
11	L11-Sensitivity Analysis (1)	F2F	Briggs
12	L12-Sensitivity Analysis (2)	F2F	Briggs
13	L13- Critical appraisal of pharmacoeconomic studies	F2F	Briggs
14	L14-Value-Based Pricing for Pharmaceuticals	F2F	Alkhatib et al, JME 2020
15	L15-The Six Delta Platform for Outcomes- Based Contracting	F2F	Alkhatib et al, JME 2020
16	Final Exam		

* Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.

** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.

Schedule of Asynchronous Interactive Activities (in the case of e-learning and blended learning)

Week	Task / Activity	Reference	Expected Results
1	Reading of J Lyle Bootman	Historical perspective by J Lyle Bootman	MK3
2	Health Economic Evaluation - simplified!	https://www.youtube.com/watch?v=cUgkWYeRsJk	MK3
3	What Is Opportunity Cost?	https://www.youtube.com/watch?v=x-hYzRncxTc	MK3
4	Quiz		
5	Intro to Markov models	https://www.youtube.com/watch?v=d0xgyDs4EBc	MS3
6	What is the EQ-5D?	https://www.youtube.com/watch?v=Id8MRfq5trc	MS2, MS3
7	Health Economics 6 – Discounting	https://www.youtube.com/watch?v=sAlFTcVYZFY	MS3
8	Sensitivity analyses in cost-effectiveness modelling	https://www.youtube.com/watch?v=1txk9FUsIbw	MC1, MC2
9	Goals and Purpose of Health Technology Assessments (HTA)	https://www.youtube.com/watch?v=4GaMl-47yuA&t=181s	MC1, MC2
10	Quiz		