

7/31/2017 1:26 PM

PHA5267: Principles of Pharmacoeconomics

Fall 2017

1 Credit Hour – [A-E Grading]

The purpose of this course is to introduce students to the fundamental methods of pharmacoeconomic analysis. Topics include the terminology used in pharmacoeconomics, research methods frequently used in pharmacoeconomics, and the role of pharmacoeconomics in the drug development process and health care decision making relevant to the practice of pharmacy. These principles will prepare the student for future coursework where the student will develop and implement individualized treatment plans, taking into consideration pharmacoeconomic factors.

Teaching Partnership Leader

Haesuk Park, Ph.D.

- Email: hpark@cop.ufl.edu
- Office: HPNP 3325
- Phone: 352-273-6261
- Office Hours: 2PM – 3PM on the following days; 9-25 (Mon), 9-27 (Wed), 9-28 (Thurs), and Oct 2 (Mon) [Attendance is optional via Big Blue Button].

See Appendix A. for Course Directory of Faculty and Staff Contact Information.

Entrustable Professional Activities

This course will prepare you to perform the following activities which the public entrusts a Pharmacist to perform:

1. Formulate evidence-based care plans in collaboration with an interprofessional team. Utilize clinical guidelines in the development of a pharmacotherapy plan.
2. Recommend solutions to needs in the medication use system and the healthcare system.

7/31/2017 1:26 PM

Course-Level Objectives

Upon completion of this course, the student will be able to:

1. Describe fundamental concepts behind rationing and economic evaluation of health care.
2. Explain the role of pharmacoeconomics in the drug development process and health care decision making.
3. Identify the role of perspective in the selection of study parameters and their impact on study design, costs, and the interpretation of results.
4. Define and describe cost-minimization analysis, cost-effectiveness analysis, cost-utility analysis, and cost-benefit analysis.
5. Outline strengths and weaknesses of standard pharmacoeconomic approaches to assess the economic impact of pharmaceutical interventions, including cost-minimization analysis, cost-effectiveness analysis, cost-utility analysis, and cost-benefit analysis.
6. Explain decision making tools such as cost-effectiveness and cost-benefit analysis and discuss their application to resource allocation, how these tools are used in practice, and what factors limit their use or interpretation.
7. Summarize applications of economic, clinical, and humanistic outcomes to improve allocation of limited health care resources and interpret pharmacoeconomic studies.
8. Apply knowledge of pharmacoeconomic approaches for performing a decision analysis
9. Describe the importance of measuring health-related quality of life.
10. Define the methods for assessing the psychometric properties of health related quality of life instruments, such as reliability, validity and responsiveness.
11. Critique the results of articles that use the following analyses that measure and estimate costs:
 - a. Cost-minimization analysis
 - b. Cost-effectiveness analysis
 - c. Cost-utility analysis
 - d. Cost-benefit analysis
 - e. Decision analysis

Course Pre-requisites

1. Completion of all Year 1 Pharm.D. program coursework including milestones.

Course Co-requisites

1. There are no co-requisites for this course.

7/31/2017 1:26 PM

Course Outline

Please routinely check your campus calendar and the Canvas course site for any messages about changes in the schedule including meeting dates/times, deadlines, and room changes.

Date Recommended Dates for Independent Study	Mod#	Unit Topic	Contact Hours [hr.]a	Faculty Author	Learning Objectives Covered
	1	Module 1: Course Overview	0.5hr	Park	1-3
9/25/17	1.1	Watch: Introduction to the Course	0.5hr	Park	
		Watch: Supplemental video – Pharmacoeconomics in Drug Formulary Decisions	0.5hr	Navarro	
	2	Module 2: Measuring and Estimating Cost and Critiquing Research Article	1.75hr	Park	3-5
9/25/17	2.1	Watch: Measuring Costs	1.5hr	Park	
9/25/17	2.2	Watch: Critiquing Research Article	0.25hr	Park	
	3	Module 3: Cost-Minimization Analysis and Cost-Effectiveness Analysis	1.75hr	Park	3-5, 11
9/26/17	3.1	Watch: Cost-Minimization Analysis	0.25hr	Park	
9/26/17	3.2	Watch: Cost-Effectiveness Analysis	1.0hr	Park	
9/26/17		Read: Cost-effectiveness of reducing glycaemic episodes through community pharmacy management of patients with Type 2 diabetes mellitus (Article for Quiz 1)	0.5hr		
	4	Module 4: Cost-Utility Analysis	2.0hr	Park	3-6, 11
9/27/17	4.1	Watch: Cost-Utility Analysis	1.5hr	Park	
9/27/17		Read: Cost-utility analysis of treatment strategies in patients with recent-onset rheumatoid arthritis (Article for iRAT/tRAT)	0.5hr		

7/31/2017 1:26 PM

Date Recommended Dates for Independent Study	Mod#	Unit Topic	Contact Hours [hr.]a	Faculty Author	Learning Objectives Covered
9/27/17 Open: 2:00pm Close: 5:00pm	1-4	Assignment: Online Quiz 1			
	5	Module 5: Cost-Benefit Analysis	2.25hr	Park	3-6, 11
9/28/17	5.1	Watch: Cost-Benefit Analysis	1.5hr	Park	
9/28/17		Read: Cost-benefit analysis of a clinical pharmacist-managed medication assistance program in a renal transplant clinic (Article for iRAT/tRAT)	0.75hr		
	6	Module 6: Decision Analysis	2.5hr	Park	3-7, 9-11
9/28/17	6.1	Watch: Decision Analysis	1.5hr	Park	
	7	Module 7: Health-Related Quality of Life	1.5hr	Park	3-7, 9-11
9/29/17	7.1	Watch: Health-Related Quality of Life	1.5hr	Park	
9/29/17 1:55-3:50pm		Active Learning Session 1	2.0hr	Park, Navarro	
10/02/17 8:30-10:25am GNV ONLY		Active Learning Session 2	2.0hr	Park	
10/02/17 10:40am- 12:35pm JAX & ORL		Active Learning Session 2	2.0hr	Park	
10/04/17 8:30-10:30am	1-7	Final Exam	2.0hr		
		Total Contact Hours in Course:	16.25hr		

7/31/2017 1:26 PM

Required Textbooks/Readings

1. Rascati Karen L. Essentials of Pharmacoeconomics, Second Edition, Lippincott Williams & Wilkins, 2013; ISBN-13: 978-1451175936; ISBN -10 number: 1451175930
 - Available via HSC Library
2. Article 1: “Cost-effectiveness of reducing glycaemic episodes through community pharmacy management of patients with Type 2 diabetes mellitus ” Hendrie et al. J Primary Prevent 2014;35:439-449
 - Available on PubMed
3. Article 2: “Cost-utility analysis of treatment strategies in patients with recent-onset rheumatoid arthritis” Wilbert et al. Arthritis & Rheumatism (Arthritis Care & Research) 2009;61:291-299
 - Available on PubMed
4. Article 3: “Cost-benefit analysis of a clinical pharmacist-managed medication assistance program in a renal transplant clinic” Chisholm et al. Clin Transplantation 2000;14:304-307
 - Available on PubMed

Use [UF VPN to access UF Libraries Resources](#) when off-campus. The UF HSC library staff can assist you with questions or issues related to accessing online library materials. For assistance contact your College of Pharmacy librarian or visit the [HSC Library Website](http://www.library.health.ufl.edu/) at this URL: <http://www.library.health.ufl.edu/>

Suggested Textbooks/Readings

Suggested materials will be posted on Canvas.

1. Attanasio et al. “Cost-minimization analysis of simvastatin vs. atorvastatin for maintenance therapy in patients with coronary or peripheral vascular disease.” Clinical therapeutics 2001.
2. Luce et al. “Methods of Cost-effectiveness analysis: Areas of consensus and debate.” Clinical Therapeutics 1995.
3. Law et al. “Cost-effectiveness analyses of the conversion of patients with non-insulin-dependent diabetes mellitus from glipizide to glyburide and of the accompanying pharmacy follow-up clinic.” Clinical Therapeutics 1995.
4. Athan et al. “Cost-effectiveness of routine and low-cost CD4 T-cell count compared with WHO clinical staging of HIV to guide initiation of antiretroviral therapy in resource-limited settings.” AIDS 2010.
5. Jackson et al. “An employer-based cost-benefit analysis of a novel pharmacotherapy agent for smoking cessation.” Journal of Occupational and Environmental Medicine 2007

Other Required Learning Resources

None

Materials & Supplies Fees

None

7/31/2017 1:26 PM

Student Evaluation & Grading

Evaluation Methods and How Grades are calculated.

Assessment Item	Grade Percentage
Online Quiz [1]	5%
iRAT [2]	10%
tRAT [2]	15%
Problem-Solving Activity	10%
Final Exam	60%
Total	100%

Table 1. Grading Scale

Rounding of grades:

Final grades in Canvas will be rounded to the 2nd decimal place. If the decimal is X.495 or higher, Canvas will round the grade to X.50. The above scale depicts this policy and grades are determined accordingly. Grade assignment is made using this policy and NO EXCEPTIONS will be made in situations where a student's grade is "close."

Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software.

1. ExamSoft™ Testing Platform
2. Canvas™ Learning Management System

For technical support, navigate to [Educational Technology and IT Support Contact Information](#) at this URL:

<http://curriculum.pharmacy.ufl.edu/current-students/technical-help/>

Percentage Range	Letter Grade
92.50-100%	A
89.50-92.49%	A-
86.50-89.49%	B+
82.50-86.49%	B
79.50-82.49%	B-
76.50-79.49%	C+
72.50-76.49%	C
69.50-72.49%	C-
66.50-69.49%	D+
62.50-66.49%	D
59.50-62.49%	D-
< 59.50%	E

Pharm.D. Course Policies

The Policies in the following link apply to this course. Review the [Pharm.D. Course Policies](#) carefully, at this URL: <http://curriculum.pharmacy.ufl.edu/current-students/course-policies/>

7/31/2017 1:26 PM

Appendix A. Course Directory

Teaching Partnership Leader/Course Director:

Haesuk Park, Ph.D.

Email: hpark@cop.ufl.edu

Office: HPNP 3325

Phone: 352-273-6261

Questions to Ask:

- Concerns about performance
- Guidance when there are performance problems (failing grades)
- General questions about content

Academic Coordinator:

Name: Sarah Burgess, M.Ed

Email: sburgess@cop.ufl.edu

Office: HPNP 4312

Phone: 352-273-5617

Absent/Tardy Email: absent2pd@cop.ufl.edu

Educational Coordinators:

McKenzie Wallen

Email: mwallen@cop.ufl.edu

Office: Jacksonville Campus

Victoria Savosh

Email: vsavosh@cop.ufl.edu

Office: Orlando Campus

Questions to Ask:

- Issues related to course policies (absences, make up exams, missed attendance)
- Absence requests (Only the Academic Coordinator handles absence requests)
- Questions about dates, deadlines, meeting place
- Availability of handouts and other course materials
- Assignment directions
- Questions about grade entries gradebook (missing grades, wrong grade)
- Assistance with ExamSoft® (Distant campus students may contact Education Coordinator for use of SofTest and assistance during exams. The Academic Coordinator is the contact person for issues related to grading and posting of ExamSoft grades.)

7/31/2017 1:26 PM

Other Teaching Partnership Faculty Members:

Robert Navarro, Pharm.D.

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