### **REQUEST FOR NEW COURSE**

1.	General Information.														
a.	Submitted by the College of: Pharmacy Today's Date: 01/13/11														
b.	Department/Division: Pharmacy Practice & Science														
c.	Contact person name: Tamela Harper Email: tjharp00@email.uky. edu Phone: 257-9384						9384								
d.	Requested Effective Da	ate:	Semester fo	llowing a	pproval	or Spe	cific Term/	Year¹:	Spring	2012					
2.	Designation and Descr	ription of F	Proposed Co	ourse.											
a.	Prefix and Number:	PPS 706													
b.	Full Title: Intermedia	ate Pharma	acoeconomi	cs & Decis	sion Analy	/sis									
c.	Transcript Title (if full t	itle is mor	e than 40 ch	naracters)	: Intern	ned Pharmaco	oeconomic	s & Dec A	ınal						
d.	To be Cross-Listed <sup>2</sup> wit	:h (Prefix a	nd Number)	): N/A											
e.	Courses must be descr for each meeting patte		<u>least one</u> of	the meet	ting patte	rns below. In	clude numb	per of act	ual con	tact hours <sup>3</sup>					
	45 Lecture	Lab	oratory <sup>1</sup>		Recitation	ı	Discussion	n	Ind	dep. Study					
	Clinical	Col	oquium		Practicum	<u> </u>	Research		Re	sidency					
	Seminar Studio Other – Please explain:														
f.	Identify a grading system:														
g.	Number of credits:	3													
h.	Is this course repeatable for additional credit?							NO 🖂							
	If YES: Maximum number of credit hours:														
	If YES: Will this course allow multiple registrations during the same semester? YES NO						NO 🗌								
i.	Course Description for Bulletin: This course is designed to equip students with a working knowledge and understanding of the application of pharmacoeconomic analysis with an emphasis on critical review of the literature.														
j.	Prerequisites, if any: Graduate standing and permission of instructor.														
l.	Prerequisites, if any:	Graduate	standing an	ia permiss	1011 01 1113	tructor.				Will this course also be offered through Distance Learning?					
k.	, ,			•		tructor.		YES <sup>4</sup>		NO 🖂					
l.	, ,	offered th	nrough Dista	ance Learr	ning?	Based Experie	ence :	YES <sup>4</sup> Service L							
	Will this course also be	e offered th	nrough Dista	ance Learr	ning?		ence :								
l.	Will this course also be Supplementary teaching	e offered thing compon	nrough Dista	ance Learr	ning?		ence :	Service L		Both					

<sup>&</sup>lt;sup>1</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.  $^{\rm 2}$  The chair of the cross-listing department must sign off on the Signature Routing Log.

<sup>&</sup>lt;sup>3</sup> In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

<sup>&</sup>lt;sup>4</sup> You must *also* submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

# **REQUEST FOR NEW COURSE**

a.	Course will be offere	d (check all that apply)	:	Fall		☐ Su	ımmer	
b.	Will the course be offered every year?							
	If NO, explain:							
5.	Are facilities and per	rsonnel necessary for t	he prop	osed new cou	rse available?		YES 🖂	NO 🗌
	If NO, explain:							
6.	What enrollment (pe	er section per semeste	r) may r	easonably be	expected? 15			
7.	Anticipated Student	Demand	•	-				
a.	•	e students primarily wi	thin the	degree progra	m <sup>2</sup>		YES 🖂	NO 🗌
		·						
b.	Will it be of interest t	to a significant number					YES 🖂	NO L
	If YES, explain:	It may be of interest economics majors.	to other	students in ar	eas of health polic	cy, healt	th services re	esearch, and
8.	Check the category r	most applicable to this	course:					
	Traditional – Offered in Corresponding Departments at Universities Elsewhere							
	Relatively New –	Now Being Widely Est	ablished					
	Not Yet Found in	Many (or Any) Other	Universit	ies				
9.	Course Relationship	to Program(s).						
a.	•	a proposed new progr	am?				YES 🗍	NO 🖂
	If YES, name the prop	<u> </u>						- 1
b.	•	new requirement <sup>5</sup> for	ANY pros	gram?			YES 🗍	NO 🖂
	If YES <sup>5</sup> , list affected p			<b>,</b>				
40	•							
10.	Information to be Plan							
а.	Is the course 400G or	r 500?					YES	NO 🖂
	If YES, the differentiation for undergraduate and graduate students must be included in the information required in <b>10.b</b> . You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR 3.1.4.)							
b.	1 1 1	ncluding course descrip		_		ading p	olicies (and 4	100G-/500-

 $<sup>^{\</sup>rm 5}$  In order to change a program, a program change form must also be submitted.

#### **REQUEST FOR NEW COURSE**

#### Signature Routing Log

#### **General Information:**

Course Prefix and Number:

PPS 706 Intermediate Pharmacoeconomics & Decision Analysis

Proposal Contact Person Name:

**Brenda Motheral** 

Email:

Phone: 323-3849

brenda.motheral@uky.edu

#### **INSTRUCTIONS:**

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

#### Internal College Approvals and Course Cross-listing Approvals:

<b>Reviewing Group</b>	Date Approved	Contact Person (name/phone/email)	Signature
Department Faculty	2/7/11	Jimmi Hatton / 323-0268 / jhatt1@email.uky.edu	plates
Graduate Program Committee	3/11/11	Jim Pauly / 3-8164 / jim.pauly@uky.ed	m and
College Graduate Faculty	3//0/11	Jim Pauly / 3-8164 / jim.pauly@uky.edu	(m/ku)
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		1 1	

### **External-to-College Approvals:**

Council	Date Approved	Signature	Approval of Revision <sup>6</sup>
Undergraduate Council			
Graduate Council			
Health Care Colleges Council	5/17/11	Mili Mafder	
Senate Council Approval		University Senate Appr	

Comments:	
OF BUILDING CONTROL OF STATE O	
:	

<sup>&</sup>lt;sup>6</sup> Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

# PPS 706: Intermediate Pharmacoeconomics & Decision Analysis Spring 2011 Mondays 3-5:50pm Room 135 BPC 3 credit hours

**Instructor:** Brenda Motheral, BPharm, MBA, PhD

**College of Pharmacy** 

323-3849

email: brenda.motheral@uky.edu

Office Hours: Monday 9-11am or by appointment

Pharmacoeconomics & Decision Analysis is designed to equip students with a working knowledge and understanding of the application of pharmacoeconomic analysis, with an emphasis on the critical review of the literature.

**Textbook:** Essentials of Pharmacoeconomics. Karen Rascati. 2009.

**Attendance:** Class attendance is mandatory. Given the limited number of class meetings, unexcused absences will result in a score of zero for class participation.

Regular and timely class attendance is critical to success in this course. Students with excused absences defined by the University Senate section 5.2.4.2 <a href="http://www.uky.edu/StudentAffairs/Code/part2.html">http://www.uky.edu/StudentAffairs/Code/part2.html</a> will not be penalized for the missed coursework but may be required to complete missed activities. All absences must be **directly** reported to and approved by the course coordinator. The right to request appropriate verification is reserved. Unexcused absences will directly affect the final grade for this course. In the event of an unanticipated University closing all classes will be cancelled and the coursework made up during the remaining time in the semester.

Missed assessments of any kind without notification or in the light of an unexcused absence will be graded as zero. In all cases, it is the responsibility of the student to procure any missed work including handouts. Students should not expect to be provided a handout if they are not in class.

All decisions regarding excused and unexcused attendance of any kind shall be at the final discretion of the course coordinator.

#### Verification of Absence

Students missing work due to an excused absence bear the responsibility of informing the instructor about their excused absence within one week following the period of the excused absence (except where prior notification is required), and of making up the missed work. The instructor shall give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

**Assignments Graded Incorrectly:** Any assignment graded incorrectly must be brought to the attention of the course director within one calendar week of the assignment being returned. One calendar week after returned, all grades become final and no corrections will be made.

**Missed Assignments:** Assignments missed without prior notification will be graded as a zero. Research papers (15-20 pages) will be required for any class or assignment missed during an unexcused absence. The graded research paper will replace the 0 grade for an unexcused absence or assignment.

**Make-up Work Policy:** Make-up work will be allowed only in the event of an excused absence as defined by University Senate section 5.2.4.2. All work must be made-up within one class period after returning to school. A grade of zero will be placed on all work missed or not completed within the specified time frame.

**Grading:** Failure to complete any of the assignments will result in a score of zero for that assignment as well as a score of zero for class participation. Grades will be assigned according to the following general guidelines: A=90-100% B=80-89% C=70-79% D=60-69% E=<60%

#### Class performance will be evaluated based upon the following:

**1. Exams.** There will be two in-class, closed-book exams, counting for 35% of the final grade in the class (Exam 1-15% and Exam 2-20%).

- 2. **Critical Reviews of Pharmacoeconomic Articles.** Nearly every week students will be expected to provide a 2-3 page critical review of a published pharmacoeconomic evaluation. The articles will be discussed in class, with one student randomly assigned to lead each week's discussion. Reviews account for 25% of the final grade in the class.
- 3. **Creation of a Decision-Analytic Model**. Each student will independently replicate a previously published decision-analytic, pharmacoeconomic model using TreeAge software. Completion of the model accounts for 10% of the final grade in the class.
- 4. **Submission and Presentation of Two Critical Reviews of Pharmacoeconomic Articles.** Students are expected to complete a critical review of two recently published pharmacoeconomic evaluations AND submit those comments as a Letter to the Editor of the publishing journal. One of the two reviews may be submitted to a relevant blog for publication. Each of the submissions must be reviewed and approved by Dr. Motheral before submission. It is important to keep in mind that most journals have short windows (2-6 weeks) for consideration of Letters to the Editor following a publication so it will be necessary to identify, write, and submit the review in a timely fashion. In addition, each student will prepare a 30-40 minute presentation discussing their reviews. The presentation will be provided to the class during an assigned class period. Students will be expected to utilize audio-visual materials during their presentation. Following the presentation, the student will lead a 10-15 minute discussion with the class. This project will account for 20% of the final grade in the class.
- 5. **Class Participation:** Students are expected to come to each lecture prepared to discuss the material being presented and the article for review. Class participation accounts for 10% of the final grade in the class.

#### **Key Outcomes**

- Understand the importance of specification/selection of perspectives to be included in the analysis.
- Identify measures of direct and indirect costs based on data on charges, expenditures, and treatment algorithms.
- Determine and use standard costs in economic evaluations.
- Specify an analytical model (cost-effectiveness/cost-utility/costbenefit/ Markov).
- Identify the strengths and weaknesses of different evaluation designs.
- Identify measures of outcomes and understand the appropriate use of QALY and utility measures.
- Understand the difference between efficacy and effectiveness data.
- Understand 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.
- Discount costs and benefits appropriately.
- Understand sensitivity analysis, including choice of variables and one- and two-way analysis.
- Construct a pharmaeconomic model using TreeAge® software.
- Critically evaluate the published pharmacoeconomic literature.

## Academic integrity, cheating, and plagiarism

Ethical behavior is expected of all students in the course. Each student in the class is expected to adhere to the highest standards of academic honesty. Cheating, plagiarism, and destruction of course materials violate the rules of the University and the ethical standards of professional behavior. Violations of the university's rules regarding academic honesty can lead to a failing grade in the course and expulsion from the University. Instances of academic dishonesty will be reported to appropriate University officials as required by University rules and procedures. University of Kentucky Code of Student Rights and Responsibilities defines academic offenses and details procedures for dealing with them. The Code can be viewed electronically on the University's web site: <a href="http://www.uky.edu/StudentAffairs/Code/part1.html">http://www.uky.edu/StudentAffairs/Code/part1.html</a> All students are expected to be familiar with the content of the Code of Student Rights and Responsibilities.

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address <a href="mailto:jkarnes@email.uky.edu">jkarnes@email.uky.edu</a>) for coordination of campus disability services available to students with disabilities.

## **COURSE OUTLINE**

Date	Topic	Readings	Assignment Due
January 24, 2011	Overview Article evaluation	Drug approval process. <a href="http://www.jabfm.org/cgi/reprint/14/5/362">http://www.jabfm.org/cgi/reprint/14/5/362</a> Types of validity <a href="http://www.amcp.org/data/jmcp/ce_v4_382-390.pdf">http://www.amcp.org/data/jmcp/ce_v4_382-390.pdf</a> Express Scripts Drug Trend Report <a href="http://www.express-scripts.com/research/studies/drugtrendreport/">http://www.express-scripts.com/research/studies/drugtrendreport/</a>	None
January 31, 2011	Costing Methodology Cost of Illness	Rascati—Chp 1 and 2	Critical review—COI Colorectal cancer. <a href="http://informahealthcare.com/doi/pdf/10.3111/13">http://informahealthcare.com/doi/pdf/10.3111/13</a> 696998.2010.536870
February 7, 2011	Cost- Minimization Analysis Cost- Effectiveness Analysis	Rascati-Chp 3, 4, and 5	Critical review—CEA Statins. http://circoutcomes.ahajournals.org/content/2/2/ 65.full.pdf+html
February 14, 2011	Cost-Utility Analysis Cost-Benefit Analysis	Rascati-Chp 6 and 7	Critical review—CUA Rheumatoid Arthritis. http://onlinelibrary.wiley.com/doi/10.1002/art.241 69/pdf
February 21, 2011	Publication Bias and Use by Decision- Makers	Bias in published cost effectiveness studies: systematic review. http://www.bmj.com/content/332/7543/699.full .pdf+html  Health technology assessment in health-care decisions in the United States. http://www.ispor.org/HTAspecialissue/Sullivan.pdf	Critical review—CBA Traveler's Diarrhea http://onlinelibrary.wiley.com/doi/10.1111/j.1708-8305.2008.00270.x/pdf
February 28, 2011	Exam 1		
March 7, 2011	Pharmacoecon omics in	ISPOR RCT-CEA Task Force Report. http://onlinelibrary.wiley.com/doi/10.1111/j.15	Critical review-RCT Asthma

	Clinical Trials	24-4733.2005.00045.x/pdf	http://onlinelibrary.wiley.com/doi/10.1111/j.1398-
		•	9995.2007.01466.x/pdf
March 14, 2011	Spring Break		
March 21, 2011	Pharmacoecon omics in Modeling-Part 1	Rascati-Chp 9  ISPOR Task Force on Modeling. http://onlinelibrary.wiley.com/doi/10.1046/j.15 24-4733.2003.00234.x/pdf	Critical review-Model H. pylori http://www.mdconsult.com/das/article/body/2314 66425- 5/jorg=journal&source=Ml&sp=696997&sid=110 4591251/N/1784/1.html?issn=0002-9270
March 28, 2011	Pharmacoecon omics in Modeling-Part 2	Rascati-Chp 10	Build decision-analytic model for Vakil and Fennerty http://www.treeagesoftware.com/resources/acad emic.html
April 4, 2011	Pharmacoecon omics in Claims Databases- Part 1	Rascati-Chp 11  Checklist for Retrospective Database Studies. http://onlinelibrary.wiley.com/doi/10.1046/j.15 24-4733.2003.00242.x/pdf	Critical review-Database Diabetes http://www.sciencedirect.com/science?_ob=Mlm g&_imagekey=B6VRS-4R63X2V-6- 1&_cdi=6242&_user=9815209&_pii=S01492918 07001877&_origin=search&_coverDate=12%2F 31%2F2007&_sk=999709993.7998&view=c&wc hp=dGLbVtb- zSkzS&md5=bf0a65b39967ba6b9919091cdc8d 5ddb&ie=/sdarticle.pdf
April 11, 2011	Pharmacoecon omics in Claims Databases- Part 2	ISPOR Task Force Part II. http://onlinelibrary.wiley.com/doi/10.1111/j.15 24-4733.2009.00601.x/pdf ISPOR Task Force Part III. http://onlinelibrary.wiley.com/doi/10.1111/j.15 24-4733.2009.00602.x/pdf	Critical review-Database Step Therapy for Antidepressants http://ajp.psychiatryonline.org/cgi/reprint/167/10/ 1202
April 18, 2011	Presentations	·	•
April 25, 2011	Presentations		
May 2, 2011	Final Exam		