

EPID 550
Clinical Economics and Decision
Making

January 17, 2020

Registration

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Instructors

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Schedule

Classes are held Wednesdays and Fridays, 10:00 AM - 11:45 in room 418 Blockley Hall.

Spring recess begins at the end of classes on Friday, March 6 and ends at 8:00 a.m. on Monday, March 16

The expected schedule for lecture topics, readings, and quizzes is provided in the SYLLABUS which can be found under the "Pages" tab on Canvas (NOT under the Syllabus tab on Canvas)

Grades

Grades will be based on class participation, homework, two quizzes, and a final examination.

Quizzes and exams will be "open book."
Quizzes will be take place in class; the final will be "take home."

Assigned Materials

Course materials including the syllabus, lecture notes, readings, homework, quizzes, examinations, and recordings will be distributed through the Internet-based Canvas website. These materials can be accessed at the following address:

<http://upenn.instructure.com/>

Special software (TreeAge) and material from the book by Glick et al. titled *Economic Evaluation in Clinical Trials, 2nd edition* are the only exceptions.

(Nearly) Everything is in the Pages Section

- **Lecture notes, homework, and the final** are provided under a tab labeled Course Handouts/Homework on the "Pages" tab Front Page.
- **Course readings** that are listed in the syllabus are provided under a tab labeled Course Readings on the "Pages" tab Front Page.
- **Critical appraisal and other articles** that are not listed in the syllabus will be provided in the "Course Handouts/Homeworks" tab under the "Pages" tab Front Page along with any notes for the critical appraisals.
- **Recordings of lectures** will be available under the tab labeled "Recordings of Lectures" under the "Pages" tab Front Page.
- **Instructions about how to use Canvas** are available here: <https://infocanvas.upenn.edu/guides/canvas-for-students/> and under the "Pages" tab in Canvas.

Selected chapters from the following 3 books have been included under a tab labeled Course Readings on the “Pages” tab Front Page in Canvas. Students who are interested in learning more about the topics presented in this course should consider reading all of these books:

Drummond M, et al. *Methods for the Economic Evaluation of Health Care Programmes, 4th Ed.* Oxford University Press, 2015

Neumann PJ, et al. *Cost Effectiveness in Health and Medicine, Second Edition.* Oxford University Press, 2016

Briggs A, et al. *Decision Modelling for Health Economic Evaluation.* Oxford University Press, 2006.

Purchases

- A copy of the book by Glick HA, Doshi JA, Sonnad SS, and Polsky D titled *Economic Evaluation in Clinical Trials, Second Edition* (published by Oxford University Press in 2015). Available on Amazon.
- Software (TreeAge Pro Suite for healthcare users)

TreeAge Pro Suite for Healthcare Users

As of 01/14/2020, TreeAge Pro Suite for healthcare users was available with a limited Student Course license for \$55 at the following web site:

<https://www.treeage.com/shop/>

To purchase this software, select "Academic Use" for Treeage Pro Healthcare and then select "Purchase Student Course License (\$55)" as the second option

DO NOT purchase TreeAge Pro Core.

Also, we do not expect to use this software until Wednesday March 4 (or Friday March 6) so plan to purchase it before Wednesday, March 4.

COURSE SUMMARY

The overall goal of this course is for students to learn quantitative tools that can be used to analyze and understand medical decisions.

- Diagnostic tests with dichotomous results
- Diagnostic tests with continuous results
- Prediction rules
- Introduction to cost-effectiveness analysis
- Mathematical modeling with decision trees
- Costing / Analysis of cost / Discounting
- Mathematical modeling with Markov techniques
- Measuring outcomes in "utility" terms
- Confidence intervals / sample size for cost-effectiveness analysis
- Economic assessment and policy analysis