

## Department of Epidemiology and Biostatistics

### Epidemiology 4600A Introduction to Health Economics

**Time:** Wednesday 2:30 p.m. - 4:30 p.m.  
Friday 10:30 a.m. - 11:30 a.m.  
**Location:** PHFM 3015

**Lab Time:** N/A  
**Lab Location:** N/A

**Instructor:** Sisira Sarma  
**Office Hours:** Friday 2:30 p.m.- 4:30 p.m.  
(PHFM 3131)  
**E-mail:** [ssarma2@uwo.ca](mailto:ssarma2@uwo.ca)  
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**Teaching Assistant:** Yhesaem Park  
**E-mail:** [ypark283@uwo.ca](mailto:ypark283@uwo.ca)  
**Office Hours:** TBD

### Course Information

**Prerequisites:** Undergraduate students in the Department of Epidemiology & Biostatistics.

Unless you have either the requisites for this course or written special permission to enroll in it, you may be removed from this course and it will be deleted from your record. Undergraduate students may seek permission from the Undergraduate Chair. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

### Course Learning Outcomes

This course is designed for undergraduate students in the Department of Epidemiology & Biostatistics who have no prior background in Health Economics. The course objectives are to provide the student with an understanding of the economics concepts and tools relevant to evaluate health programmes, policies and interventions in the field of health & medicine. The topics to be covered are: microeconomic tools for health economics, production of health, demand for healthcare, demand for health insurance, market failure in the health sector, and introduction to economic evaluation techniques (cost-minimization analysis, cost-effectiveness analysis, cost-utility analysis, and cost-benefit analysis).

By the end of this term, students should be able to understand:

- the basic economics principles applied to health economics;
- efficiency and equity concepts and related tools;
- the logic behind the health economics concepts and methods applied to evaluate health interventions;
- the models of health capital and demand for health insurance; and
- the differences among cost-minimization, cost-effectiveness, cost-benefit, and cost-utility analyses and know the strengths and weaknesses of each technique.

## Course Materials

### Required Text:

Hurly, JE. Health Economics, 1st Edition. Mc-Graw-Hill Ryerson, 2010. Chapters 1-10.

– **Electronic Version:** An electronic version of the text is available through Campus EBookstore. It can be purchased from this site <http://www.campusebookstore.com/>, by clicking **Shop** and then selecting **e-books**. The ISBN for the e-book is **9780666386199**. Individuals who purchase the e-book will be emailed a redemption code and instructions on how to access the e-book online.

– **Print Version:** Health Economics is also available to purchase through McMaster website. The direct link to the page on the Campus Store website is <https://goo.gl/jtH3tB>. On Avenue-to-Learn you will find a PDF document with steps to find the page using the menus available on the Campus Store's site. The store can ship to most places in Canada within one week.

Additional course materials will be provided on the course's OWL website.

### Other Useful Texts:

Drummond MF, Sculpher MJ, Torrance GW, O'Brien, BJ, Stoddart GL. Methods for the Evaluation of Health Care Programmes, 4<sup>th</sup> edition. Oxford University Press: New York, 2015.

Folland S, Goodman AC, Stano M. The Economics of Health and Health Care, 7<sup>th</sup> edition. Pearson Prentice Hall: New Jersey, 2012.

## I. Microeconomic Tools

Scarcity, opportunity cost, demand, supply, market equilibrium, elasticity, production, cost, competitive markets, efficiency, equity

### Readings: Hurley Chapters 2-3

## II. Introduction to Health Economics

Production of health, demand for healthcare, moral hazard, asymmetric information, demand for health insurance, public versus private health insurance, market failure in the health sector

Rattinger GB, Jain R, Ju J, Mullins CD. Principles of economics crucial to pharmacy students' understanding of the prescription drug market. *American Journal of Pharmaceutical Education* 2008, 72(3):61.

Available at: <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2508734&blobtype=pdf>

Kiil, A, Houlberg, K. How does copayment for health care services affect demand, health and redistribution? A systematic review of the empirical evidence from 1990 to 2011. *European Journal of Health Economics* (2014) 15(8):813 – 828.

Camejo, RF, McGrath, C, Miraldo, M, Rutten, F. Distribution of health-related social surplus in pharmaceuticals: an estimation of consumer and producer surplus in the management of high blood lipids and COPD. *European Journal of Health Economics* (2014) 15(4):439 – 445.

Nixon, J., Ulmann, P. The relationship between health care expenditure and health outcomes. Evidence and caveats for a causal link. *European Journal of Health Economics* (2006) 7(1):7 –18.

WHO publication: The Economics of Social Determinants of Health and Health Inequalities.  
Available at: <http://apps.who.int/iris/handle/10665/84213>

O'Donnell, Owen; van Doorslaer, Eddy; Wagstaff, Adam; Lindelow, Magnus. 2008. Analyzing Health Equity Using Household Survey Data: A Guide to Techniques and Their Implementation. Washington, DC: World Bank.

<https://openknowledge.worldbank.org/bitstream/handle/10986/6896/424800ISBN978011OFFICIAL0USE0ONLY10.pdf?sequence=1&isAllowed=y>

The Humble Economist by Tony Culyer. Available at:  
<https://www.york.ac.uk/che/publications/books/the-humble-economist/>

### **III. Introduction to Health Economic Evaluation**

#### **Cost-effectiveness, Cost-utility and Cost-benefit Analyses**

**Readings: Hurley Chapter 4; Drummond *et al.***

Guidelines for the economic evaluation of health technologies: Canada [Internet]. 4th ed. Ottawa: CADTH; 2017.

[https://cadth.ca/sites/default/files/pdf/guidelines\\_for\\_the\\_economic\\_evaluation\\_of\\_health\\_technologies\\_canada\\_4th\\_ed.pdf](https://cadth.ca/sites/default/files/pdf/guidelines_for_the_economic_evaluation_of_health_technologies_canada_4th_ed.pdf)

Husereau *et al.* 2013. Consolidated Health Economic Evaluation Reporting Standards (CHEERS) statement. Available at: <http://www.biomedcentral.com/1741-7015/11/80>

Meltzer MI. Introduction to health economics for physicians. *Lancet* 2001, 358(9286): 993-998.

Provenzale D. An overview of economic analysis for the practising gastroenterologist and hepatologist. *European Journal of Gastroenterology and Hepatology* 2004, 16(6): 513-517.

#### **Methods of Evaluation**

The assignments and exams will be based on lecture material, assigned readings from the textbooks, journal articles and all other assigned course materials. You are encouraged to work together with your fellow classmates on the assignments, but the answers and interpretation of the results should be your own. The course assessment will be based on class participation and presentation of a research paper, four assignments, one mid-term examination to be held in class and final examination. The course requirements and their weights in the final grade are as follows:

- 20% - In-Class Quizzes and Class Participation
- 5% - Presentation of a published research paper (a list of papers will be determined and available in OWL website after the Mid-term)
- 25% - Four Assignments: October 05, October 21, November 18, December 02
- 20% - Mid-term Exam: October 26
- 30% - Final Exam (TBA)

## Western Academic Policies and Statements

### Absence from Course Commitments

#### [Policy on Academic Consideration for Student Absences](#)

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a [self-reported absence or via the Academic Counselling unit](#). Students have two self-reports to use throughout the academic year; absence from course commitments including tests, quizzes, presentations, labs, and assignments that are worth 30% or less can be self-reported. Self-reported absences cover a student for 48 hours (yesterday + today or today + tomorrow). Your instructor will receive notification of your consideration; however, you should contact your instructor immediately regarding your absence. Students are expected to submit missed work within 24 hours of the end of the 48-hour period. Please review Western's [Academic Consideration for Student Absences](#) policy for more details.

If a student has used both self-reported absences or will miss more than 48 hours of course requirements, a Student Medical Certificate (SMC) should be signed by a licensed medical or mental health practitioner to be submitted to academic counselling ([scibmsac@uwo.ca](mailto:scibmsac@uwo.ca)).

### Special Examinations

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations and academic standing can be found [here](#).

### Statement on Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

## **Copyright and Audio/Video Recording Statement**

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws. You must always ask permission to record another individual and you should never share or distribute recordings.

## **Support Services**

As part of a successful student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western's Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page <http://www.music.uwo.ca/>, and our own McIntosh Gallery <http://www.mcintoshgallery.ca/>.

Registrarial Services: <http://www.registrar.uwo.ca>

USC Student Support Services: <http://westernusc.ca/services/>

Academic Support and Engagement: <http://academicsupport.uwo.ca/>

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (Graduate or Undergraduate Chair), or other relevant administrators in their unit. Health and Wellness-related information and services are available at <https://www.uwo.ca/health/>.

Students who are in emotional/mental distress should refer to Mental Health@Western <https://www.uwo.ca/health/> for a complete list of options about how to obtain help.

## **Accessible Education Western (AEW)**

Western is committed to achieving barrier-free accessibility for all its members. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective program.

Students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education Western (AEW), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AEW and their programs (normally the Program Chair and/or Course Instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction. More information and access to services is available on the AEW website:

[http://academicsupport.uwo.ca/accessible\\_education/index.html](http://academicsupport.uwo.ca/accessible_education/index.html)

## **Department & Faculty Offices**

The Department of Epidemiology and Biostatistics is located on the third floor of the Western Centre for Public Health & Family Medicine (PHFM) on Western University's Main Campus.

Undergraduate Students requiring academic counselling should contact the Science & Basic Medical Sciences Academic Counselling Office: <https://www.uwo.ca/sci/counselling/>.

## **Technology Requirements**

You are responsible for all required course materials and announcements posted to the course's OWL website. Please ensure after the first class that when you log in you are able to access the course site. A copy of the course outline will be available on both OWL and the departmental website.

## **Cell Phone and Electronic Device Policy**

The Schulich School of Medicine & Dentistry is committed to ensuring that testing and evaluation are undertaken fairly across all our departments and programs. For all tests and exams, it is the policy of the School and the Department of Epidemiology and Biostatistics that any electronic devices, i.e., cell phones, tablets, cameras, or iPod are strictly prohibited. These devices **MUST** be left either at home or with the student's bag/jacket at the front of the room and **MUST NOT** be at the test/exam desk or in the individual's pocket. Any student found with one of these prohibited devices will receive a grade of zero on the test or exam. Non-programmable calculators are only allowed when indicated by the instructor. The Department of Epidemiology and Biostatistics is not responsible for stolen/lost or broken devices.