UCLouvain

wfsp2238p
2020

Advanced epidemiology (UCL)

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

4 credits	20.0 h + 16.0 h	Q2

Teacher(s)	Speybroeck Niko ;
Language :	English
Place of the course	Bruxelles Woluwe
Aims	*The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Closed book (theory) & open book exam (practical exercise) and excercises during the teaching sessions Note : 60% exam + 40% data analysis project
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** In English The lectures will be illustrated by concrete cases extracted from literature. Sessions of exercises will go along with the lectures. The exercises will be conducted in small groups, worked out by the students and discussed together in class. The exercises are simple applications (related to the knowledge acquired in the theoretical part), or exercises combining several principles (related to the teaching objectives) which will allow the use of a diversity of skills and which will be the object of group works at specific times (the methodology will be explained during the course). Software : R R is an interactive programming language containing a very large collection of statistical methods and important graphic facilities. It is a free clone of the S-Plus software marketed by MathSoft and developed by Statistical Sciences around the language S. The internet site of the "R core-development TEAM", http://www.r-project.org, is the best source of information on the software R.
Content	Module 1: The use of routine data for the generation of epidemiological information Module2: Review of the basic concepts in epidemiology Module 3: Bias Control (Bias: revision; Control of confounding (random sampling, pairing, standardization,…); Adjustment by a regression model: example: logistic regression Module 4: Analyzing and understanding incidence rates (Logistic and Poisson regression) Module 5: Simulation Modeling in epidemiology Module 6: Study of some advanced epidemiological approaches and illustrations (Space-time models, Classification and regression Trees; Decomposing the inequalities of health.)
Inline resources	Documents available on Moodle "R core-development TEAM", http://www.r-project.org, is the best source of information on the software R.
Bibliography	"Statistique/épidémiologie" Ancelle; collection " Sciences fondamentales "; éditions Maloine, Paris (2002). "The Oxford Handboractice" Pencheon, Guest, Melzer, Gray; Oxford University Press; Oxford (2006)
Faculty or entity in charge	FSP

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Aims
Master de spécialisation en méthodologie de la santé publique - Specialized master in public health methodology	MPHM2MC	4		🔍
Interdisciplinary Advanced Master in Science and Management of the Environment and Sustainable Development	ENVI2MC	4		🔍