UCLouvain

wfsp2238

2026

Advanced epidemiology

5.00 credits	20.0 h + 20.0 h	Q2

Teacher(s)	Speybroeck Niko ;
Language :	English
Place of the course	Bruxelles Woluwe
Prerequisites	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Learning outcomes	
Evaluation methods	The exam consists of a written examination (theory and exercises). It also includes exercises using R. The evaluation is in English. Artificial intelligence (AI) will not be used or taken into account in this course.
Teaching methods	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 individually, 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. The exercises will be solved by hand and using R. 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	· Basic epidemiology – repetition 1. Descriptive epidemiology: indicators 2. Analytic epidemiology: studies, measures, bias · Advanced epidemiology 1. Multivariable regression 2. Disability-Adjusted Life Years 3. Classification and regression trees 4. Disease transmission models
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	Learning outcomes
Master [120] in Statistics: Biostatistics	BSTA2M	5		🔍
Master [120] in Public Health	ESP2M	5	WFSP2104 AND WFSP2105	🔍
Certificat d'université : Statistique et science des données (15/30 crédits)	STAT2FC	5		🔍