







In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

3 credits	15.0 h + 15.0 h	Q2
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Teacher(s)	Bugli Céline (compensates Pircalabelu Eugen) ;Pircalabelu Eugen ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	Mathematical notions. <i>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.</i>
Main themes	The objective of this course is to give a basic knowledge in the statistical data processing related with the biomedical domain. The course also deals with how computer software, in particular JMP (SAS) can be used to present and analyze data. The course comprises theoretical lectures and exercise sessions: One- and two-dimensional descriptive statistics. Inferential statistics: populations and samples, probabilities, variables, theoretical distributions, confidence intervals (means, variance, proportion), hypothesis testing based on sample means (Student t-test) and proportions.
Aims	This course is designed to introduce the students to the statistical and methodological issues applied to problems in the biomedical sciences and to avoid the common pitfalls in data analysis. At the end of the course the successful student will be able to use the techniques of inferential statistics within the framework of his/her research. The course focuses on the most frequently used statistical methods. The underlying mathematical developments are limited to a strict minimum and replaced by intuitive reasoning and concrete examples, especially via practical exercise sessions. 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'. ----- <i>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".</i>
Evaluation methods	Due to the COVID-19 crisis, the information in this section is particularly likely to change. Evaluation based on written evaluation with use of JMP software
Content	This course includes lectures and exercises with JMP software. It contains summary of the concepts of descriptive statistics and a two-dimensional: produce useful graphical and numerical summaries like mean, median, standard deviation, variance, confidence interval. It focuses mainly on the basic issues of statistical inference: population and sample, probabilities, random variables, distribution theory, type 1 and type 2 errors , confidence intervals (mean, variance, and proportion), and hypothesis tests related to the mean (Student's t) and proportions.
Inline resources	https://moodleucl.uclouvain.be/course/view.php?id=9327
Faculty or entity in charge	FARM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Additionnal module in Pharmacy	WFARM100P	3		
Approfondissement en sciences pharmaceutiques - recherche	WFARR100P	3		
Bachelor in Biomedicine	SBIM1BA	3	WSBIM1001	
Bachelor in Pharmacy	FARM1BA	3	LANGL1854	
Master [180] in Medecine	MD2M	3		
Certificat d'université : Statistique et sciences des données (15/30 crédits)	STAT2FC	3		
Bachelor in Medecine	MD1BA	2		