

3.0 credits	22.5 h + 22.5 h	1q
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Teacher(s) :	Bogaert Patrick ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	LBIR1203 Probabilité et statistique I
Main themes :	Introduction to statistics - Common methods for point estimation - Confidence interval for a mean and a variance - Hypothesis testing and inference - Linear models and regression.
Aims :	<p>a. Contribution of this activity to the learning outcomes referential : 1.1, 2.1</p> <p>b. Specific formulation of the learning outcomes for this activity At the end of this activity, the student is able to :</p> <ul style="list-style-type: none"> <li>· Name, describe and explain the theoretical concepts underlying the statistical inference approach and the theoretical models that are used in this framework;</li> <li>· Connect the deductive approach of probability theory to the inductive approach of statistical inference by clearly identifying the probabilistic models that are subject to this inference;</li> <li>· Translate mathematically textual statements if an inferential problem in statistics by using a rigorous mathematical and appropriate statistical models and by relying on appropriate theoretical tools and estimation methods;</li> <li>· Solve an applied problem by using a sound approach that relies on a correct use of well identified models and relevant tools of the inferential statistical framework;</li> <li>· Validate the internal consistency of the mathematical expressions and results based on data at hand and logical constraints that are induced by the statistical framework;</li> </ul> <p><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></p>
Evaluation methods :	Evaluation: Open book written examination (only with the original material). The examination is composed of exercises to be solved. Its duration is about 3 hours.
Teaching methods :	Regular courses and supervised practical exercises
Content :	The course will complete the basic notions already presented during the course LBIR 1203 - Probability & Statistics. The student will be able to use the most classical estimation and inference methods for one or two means or variances, as well as for the most classical linear models. Few exercises will be devoted to the use of computer software in order to illustrate the various concepts.
Cycle and year of study :	<p>&gt; <a href="#">Preparatory year for Master in Statistics: Biostatistics</a></p> <p>&gt; <a href="#">Bachelor in Bioengineering</a></p> <p>&gt; <a href="#">Bachelor in Information and Communication</a></p> <p>&gt; <a href="#">Bachelor in Philosophy</a></p> <p>&gt; <a href="#">Bachelor in Pharmacy</a></p> <p>&gt; <a href="#">Bachelor in Computer Science</a></p> <p>&gt; <a href="#">Bachelor in Economics and Management</a></p> <p>&gt; <a href="#">Bachelor in Motor skills : General</a></p> <p>&gt; <a href="#">Bachelor in Human and Social Sciences</a></p> <p>&gt; <a href="#">Bachelor in Sociology and Anthropology</a></p> <p>&gt; <a href="#">Bachelor in Political Sciences: General</a></p> <p>&gt; <a href="#">Bachelor in Mathematics</a></p> <p>&gt; <a href="#">Bachelor in Biomedicine</a></p> <p>&gt; <a href="#">Bachelor in Engineering</a></p> <p>&gt; <a href="#">Bachelor in Religious Studies</a></p>
Faculty or entity in charge:	AGRO