

6.0 credits	30.0 h	1q
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Teacher(s) :	Van Keilegom Ingrid ; Segers Johan ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Main themes :	The course covers the asymptotic theory in parametric inference, M- and Z- estimators, U-statistics, empirical processes and the functional delta method. In a second part of the course, these tools are applied in modern special topics of mathematical statistics such as, e.g., extreme value theory, ill-posed inverse problems,
Aims :	This course covers the necessary tools in asymptotic statistics in order to perform modern research in statistics.  <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>
Content :	<p>Contents</p> <ol style="list-style-type: none"> <li>1. Stochastic convergence</li> <li>2. Delta method and moment estimators</li> <li>3. Projections and U-statistics</li> <li>4. Empirical processes</li> <li>5. M- and Z-estimators</li> <li>6. Capita selecta on a modern research topic in statistics</li> </ol> <p>Methods</p> <p>Lectures</p> <p>Take-home readings</p> <p>Oral presentations by students</p>
Other infos :	<p>Prerequisites:</p> <p>Analyse statistique (MATH2440)</p> <p>Evaluation:</p> <p>Oral presentations during the semester, and oral or written exam covering the lectures.</p> <p>Support:</p> <p>A syllabus and/or transparencies.</p> <p>Supplementary literature:</p> <p>Serfling, R. J. (1980) Approximation Theorems of Mathematical Statistics. Wiley, New York.</p> <p>van der Vaart, A. (1998) Asymptotic Statistics. Cambridge University Press, Cambridge.</p>
Cycle and year of study :	<p>&gt; <a href="#">Certificat universitaire en statistique</a></p> <p>&gt; <a href="#">Master [120] in Statistics: General</a></p>
Faculty or entity in charge:	LSBA