

5.0 credits	25.0 h + 15.0 h	1q
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Teacher(s) :	
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<ol style="list-style-type: none"> <li>1. Introduction to population projections.</li> <li>2. Mathematical methods : exponential, logistic and Gompertz models.</li> <li>3. The cohort component method.</li> <li>4. Projecting the components of population change :                     <ul style="list-style-type: none"> <li>{ Mortality : extrapolation of death rates, use of model life tables, Lee and Carter (1992) method.</li> <li>{ Fertility : extrapolation of fertility rates, use of standard age patterns of fertility, period vs. cohort approaches.</li> <li>{ International migration : projection of numbers of migrants and migration rates.</li> </ul> </li> <li>5. Uncertainties in population projections : comparison of scenarios, of projections from different producers, ex-post analyzes.</li> <li>6. Extensions : multi-state models (household perspectives, perspectives by level of educational attainment) and micro-simulation models (kinship networks).</li> </ol>
Aims :	<p>Part B of this course is a thorough introduction to methods of population projections. At the end of this course, students will be able to :</p> <ol style="list-style-type: none"> <li>1. master key tools used in population projections,</li> <li>2. make population projections using the appropriate tools (Excel spreadsheets and projection software),</li> <li>3. understand the influence of changes in the components of the population dynamics (fertility, mortality and migration) on changes in populations (volume and structure) at different geographical levels and different time horizons,</li> <li>4. critically interpret the projections results.</li> </ol> <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>
Cycle and year of study :	<ul style="list-style-type: none"> <li>&gt; <a href="#">Master [120] in Statistics: General</a></li> <li>&gt; <a href="#">Master [120] in Agricultural Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Environmental Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Forests and Natural Areas Engineering</a></li> <li>&gt; <a href="#">Master [120] in Chemistry and Bio-industries</a></li> <li>&gt; <a href="#">Master [120] in Statistics: General</a></li> <li>&gt; <a href="#">Master [120] in Chemistry and Bioindustries</a></li> <li>&gt; <a href="#">Master [120] in Environmental Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Forests and Natural Areas Engineering</a></li> <li>&gt; <a href="#">Master [120] in Agricultural Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Environmental Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Forests and Natural Areas Engineering</a></li> <li>&gt; <a href="#">Master [120] in Agricultural Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Chemistry and Bioindustries</a></li> <li>&gt; <a href="#">Master [120] in Environmental Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Forests and Natural Areas Engineering</a></li> <li>&gt; <a href="#">Master [120] in Agricultural Bioengineering</a></li> <li>&gt; <a href="#">Master [120] in Chemistry and Bioindustries</a></li> </ul>
Faculty or entity in charge:	PSAD