



3.00 credits

10.0 h + 20.0 h

Q2

|                             |  |
|-----------------------------|--|
| Teacher(s)                  | Andrade Amorim Christiani ;Bertrand Luc ;Corbet Cyril ;Dessy Chantal ;Dumoutier Laure ;Henriet Patrick ;Horman Sandrine ;Jonas Jean-Christophe (coordinator) ;   |
| Language :                  | English  |
| Place of the course         | Bruxelles Woluwe   |
| Prerequisites               | <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                 | <p>At the end of the year, the student will :</p> <ul style="list-style-type: none"> <li>• know the pathophysiology of the diseases covered during classes, from the molecule to the cell, the cell to the organ, and the organ to the organism</li> <li>• understand/be able to explain the link between the molecular and cellular alterations described and the development of the chronic diseases covered during classes, as well as the mode of action of drugs targeting these alterations and their impact in other organs</li> <li>• be able to analyze and criticize a conference or paper in that field ; use his/her new knowledge and skills to investigate unanswered questions on the topic</li> <li>• imagine new approaches to study the pathophysiology of other diseases</li> </ul> |
| Learning outcomes           | <p><b>At the end of this learning unit, the student is able to :</b></p> <p>1 This course requires good knowledge of cellular and molecular biology, biochemistry of cell metabolism, immunology, cell and organ physiology, and human pathology.</p>  |
| Evaluation methods          | <p>Written examination or assignment for the different parts of the course, as specified otherwise by each professor. Questions are written in English, but students can choose to answer in French or English.</p> <p>The final note will be computed as the geometric mean of the notes obtained in each part. Is is therefore lower than the arithmetic mean in case of a major failure in one part. Failure to submit one assignment or more will therefore lead to a global note of 0.</p>  |
| Teaching methods            | The course consists in a series of lectures or inverted classes on specific topics.  |
| Content                     | The classes will cover the pathophysiological mechanisms underlying the development of frequent non-communicable human diseases, the drugs targeting these mechanisms and unanswered questions on the topic (biomedical research). The link between the molecular, cellular, and tissue alterations and their impact on the whole organism will be highlighted as much as possible. Diseases covered during classes include (non-exhaustive list): diabetes and its complications ; hemostatic disorders; endothelial dysfunction and vascular remodeling in cardiovascular diseases; regenerative medicine ; cancers; endometriosis ; skin diseases.  |
| Inline resources            | Slides projected during classes and additional documents will be posted on MoodleUCL.  |
| Other infos                 | This course requires good knowledge of cellular and molecular biology, biochemistry of cell metabolism, immunology, cell and organ physiology, and human pathology.  |
| Faculty or entity in charge | SBIM   |

| <b>Programmes containing this learning unit (UE)</b> |                         |         |   |   |
|--|-------------------------|---------|---|---|
| Program title  | Acronym                 | Credits | Prerequisite  | Learning outcomes   |
| Master [60] in Biomedicine                           | <a href="#">SBIM2M1</a> | 3       |   |  |
| Master [120] in Biomedicine                          | <a href="#">SBIM2M</a>  | 3       | <a href="#">WSBIM2280</a> AND<br>( <a href="#">WSBIM2112</a> OR <a href="#">WSBIM2151</a> ) |  |