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| 2.0 credits | 15.0 h | 1q |
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| Teacher(s) :                 | Michiels Thomas ;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Language :                   | Français                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 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 :                | General structure, replication cycles, and classification of viruses; antiviral agents and vaccination; Reverse genetics and use of viruses as vectors. Selected viruses will be taken as examples to illustrate the diversity of host-virus interactions and the outcome thereof (latency, cellular transformation, oncogenesis, antigenic variation and escape of immune responses, AIDS...).                                                                                                                                                                                                                                                                   |
| Aims :                       | The lectures present basic concepts on structure and function of animal viruses. It outlines the relationship between the basic replication cycle of the virus and the outcome of the infection for the host. It aims at giving the student the ability to use basic knowledge of viral life cycles as a tool to understand the techniques that are used to detect viruses, develop antiviral compounds. <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 :                    | Histories of viruses discovery, characterization and classification.<br>Structure and replication cycle of animal viruses (DNA viruses, RNA viruses and retroviruses).<br>Host-virus interaction (cellular transformation, latency, antigenic variation, cancer, oncogenes, AIDS). Vaccination and antiviral agents.<br>Reverse genetics and use of viruses.<br>Non-conventional agents.                                                                                                                                                                                                                                                                          |
| Other infos :                | Prerequisite: basic biochemistry, molecular and cellular biology: nature and function of nucleic acids and proteins; gene expression, protein synthesis, modification and targeting in eucaryotic cells; organization and function of the eucaryotic cell.<br><br>Assessment: By written (or oral) exam. The students will be examined on their knowledge of the subject, and on their capacity to use this knowledge to solve problems                                                                                                                                                                                                                           |
| Faculty or entity in charge: | SBIM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Programmes / formations proposant cette unité d'enseignement (UE) |         |         |                                                                                                                                                                  |                                                                                     |
|-------------------------------------------------------------------|---------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Intitulé du programme                                             | Sigle   | Credits | Prerequis                                                                                                                                                        | Acquis d'apprentissage                                                              |
| Bachelor in Biomedicine                                           | SBIM1BA | 2       | <a href="#">WMD1120</a> and <a href="#">WMD1006</a> and<br><a href="#">WSBIM1226</a> and WSBIM1227 and<br><a href="#">WMDS1211</a> and <a href="#">WFARM1282</a> |  |