



3.00 credits

30.0 h + 10.0 h

Q1

|                             |   |
|-----------------------------|---|
| Teacher(s)                  | Dumont Patrick ;Rezsohazy René ;  |
| Language :                  | French  |
| Place of the course         | Louvain-la-Neuve  |
| Prerequisites               | To follow this course, it is necessary to master the knowledge and skills developed in the courses LBIO1112 et LBIO1234A  |
| Main themes                 | This activity is one of the three integrated animal biology activities. It addresses reproductive biology, with a focus on mammals, and animal development, with the early development of several model animals and organogenesis in mammals.   |
| Learning outcomes           | <p><b>At the end of this learning unit, the student is able to :</b></p> <ul style="list-style-type: none"> <li>• know and understand animal reproduction and development;</li> <li>• to understand the fundamental unity of the animal kingdom by studying the common basic mechanisms of reproduction and embryonic development of species belonging to the major phyla.</li> <li>• to apprehend the diversity of the animal kingdom by studying the remarkable particularities of the embryonic development of species representative of the branches, the evolutionary dimension of this diversity being underlined;</li> <li>• to explain in detail the concepts related to the different stages of embryonic and foetal development in vertebrates in general, and in mammals in particular.</li> </ul> |
| Evaluation methods          | <p>Oral examination in three parts, with short preparation time.</p> <p>Three questions drawn at random. One question for the first part of the course (reproduction), and two others for the second part (development: animal models; development: organogenesis).</p> <p>Oral discussion on the three questions and then discussion without preparation on several specific elements of the course.</p> <p>In case of a severe failure to one of the questions, the overall mark might reflect this as a failing grade.</p> <p>In case invited speaker seminars are organized, the student report will be evaluated and will account for 1/10th of the final mark.</p>  |
| Teaching methods            | <p>Participatory Lecture: Students are stimulated to raise questions and solve problems during the sessions.</p> <p>Details of the practical work/exercises to be specified at the beginning of the activity, they will consist in seminars given by invited speakers. A short report will be produced by the students following the seminars.</p>  |
| Content                     | <ol style="list-style-type: none"> <li>1. Gametogenesis, fertilization, zygote segmentation</li> <li>2. Early model development: C. elegans, Drosophila, sea urchin, sea squirt, zebrafish, xenope</li> <li>3. Early development and organogenesis in mammals: face and pharynx, musculoskeletal system, respiratory system, digestive system, cardiovascular system, urogenital system, nervous system and sense organs.</li> </ol>  |
| Faculty or entity in charge | BIOL  |

| <b>Programmes containing this learning unit (UE)</b> |                         |         |              |   |
|--|-------------------------|---------|--------------|---|
| Program title  | Acronym                 | Credits | Prerequisite | Learning outcomes   |
| Bachelor in Biology                                  | <a href="#">BIOL1BA</a> | 3       |              |  |
| Minor in Biology                                     | <a href="#">MINBIOL</a> | 3       |              |  |