

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

3 credits

20.0 h + 15.0 h



Q2



**This learning unit is not being organized during this academic year.**

|                             |   |
|-----------------------------|---|
| Teacher(s)                  | Chaumont François ;   |
| Language :                  | French  |
| Place of the course         | Louvain-la-Neuve  |
| Main themes                 | The structural and functional characteristics of plant cells are analysed first. The regulation mechanisms of cell cycle, cytokinesis, elongation and cell differentiation are then studied. All through the course the student is introduced to scientific communication through the critical analysis of the form and the content of articles on the morphogenesis processes tackled during the course.   |
| Aims                        | <p>1 - Allow the student to understand how the plant cell divides, grows and differentiates - Discover the physiological, cellular and molecular mechanisms controlling the plant cell growth and differentiation - At the end of the course, the students should understand the strategies and experimental methodologies used to understand plant development and morphogenesis</p> <p>-----</p> <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>  |
| Evaluation methods          | <p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>The assessment will take into account:</p> <ul style="list-style-type: none"> <li>- the preparation and presentation of the themes in front of the class (flipped classroom)</li> <li>- a detailed analysis of a literature article on a topic related to the course. Each student will prepare a written (report) and oral (presentation to other students) synthesis and answer questions from the teacher and fellow students.</li> <li>- the written answers to two questions on concepts related to the study of plant morphogenesis and development.</li> </ul> <p>The students will be asked to self-assess themselves on flipped classroom work and this self-assessment can be used to adapt the teacher's grade.</p> |
| Teaching methods            | <p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b></p> <p>The course includes modules during which the teacher introduces the basic concepts and some themes, and other modules organized in flipped classroom. In this context, the students are divided into working groups and assigned a theme. They will develop the theoretical aspects of this theme and analyze and present an article from the literature on the subject.</p>   |
| Content                     | The structural and functional characteristics of plant cells are analysed. The molecular mechanisms of cell cycle regulation, cell elongation and differentiation, cell wall formation, plast differentiation, and plasmodesmata function are studied. The general principles of the experimental approaches needed to investigate these processes are described.   |
| Inline resources            | Moodle  |
| Bibliography                | Ouvrages de référence mentionnés au premier cours   |
| Other infos                 | Precursory courses: Basic courses in plant biology and physiology.  |
| Faculty or entity in charge | BIOL  |

**Programmes containing this learning unit (UE)**

| Program title   | Acronym | Credits | Prerequisite | Aims  |
|---|---------|---------|--------------|---|
| Master [120] in Biochemistry and Molecular and Cell Biology | BBMC2M  | 3       |              |  |
| Additional module in Biology                                | APPBIOL | 3       |              |  |