

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

3 credits

22.5 h + 15.0 h

Q1

Teacher(s)	Lobet Guillaume ;Lutts Stanley (coordinator) ;Quinet Muriel ;
Language :	French
Place of the course	Louvain-la-Neuve
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>
Aims	<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>
Evaluation methods	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>written exam for the theoretical part and written or oral reports for practical part</p> <p>Participation in practical work, tutorials and exercises is mandatory and essential to validate the teaching unit. Any unjustified absence entails a penalty on the EU examination which may go as far as the cancellation of the examination mark for the relevant study year (0/20). In the event of repeated and even justified absences, the teacher may propose to the jury to oppose the registration for the EU examination in accordance with article 72 of the RGEE</p>
Teaching methods	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>Lectures in auditorium and practicals in greenhouses</p>
Content	<p>The first part concerns the mechanisms of perception and communication that guarantee the integration of organ growth, the phenological development of the plant and the response to external constraints. The messengers considered are phytohormones and secondary metabolites. The themes developed are the regulation of phenological development and the elicitation of natural defense mechanisms. These parts introduce biotechnology, ecophysiology, horticulture and phytopathology. The second part concerns the notions of efficiency defined at the plant level . The three efficiencies considered are the water use efficiency (conductances, climate, photosynthesis, soil), the light use efficiency (interception and translocation, climate, photosynthesis) and the nitrogen use efficiency (biochemistry (collection and use), photosynthesis and soil). The third part concerns the functioning of the plant under abiotic constraints. The topics are deficiencies (water, nitrogen, phosphorus) and excesses (water, salt, metals).</p>
Inline resources	https://plantmodelling.shinyapps.io/PlaNet_Maize/
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Bioengineering	BIR1BA	3	LBIR1211 AND LBIR1251	