

6.0 credits	45.0 h + 30.0 h
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Teacher(s) :	Leclercq Joëlle ; Declerck Stephan ; Wesselingh Renate ; Chaumont François ;
Language :	Français
Place of the course	Bruxelles Woluwe
Prerequisites :	WMD1105 chimie générale
Main themes :	- Introduction to mycology - Specificity, structure and function of the plant cell + photosynthesis - Plant histology and anatomie - Life cycles of plants and reproduction in flowerign plants (flower, seed, fruit) - Introduction to main chemical classes of plant drugs - Systematic description of the main families of medical and/or toxic plants - Engeneering for medical plants and outputs improprement, introduction to plant biotechnology
Aims :	At the end of this class the student will be able to recongize and identify the most important plants used in Pharmacy (mushrooms, médicinal plants, toxic plants) - to prevent and identify the poisonings and their causes - to identify the medical drugs that he will sell or appraise in his professional life - to be able to understand the class of pharmacognosy including biosynthèses and chemiotaxonomy He will be introduced to plant biotechnology and classification of the main chemical classes of the plant constituents <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 :	Theoretical knowledge is evaluated by a written examination (~60%) Practical knowledge is evaluated through the correction of the herbal and two exercices of plant identification: with a flora and on slices. (~ 40%) To pass the examination the student will be able to integrate the different parts of the class anf have a global vue of the Plant Kingdom.
Content :	The class begins with an introduction to the Kingdom Fungi and the identification of mushrooms Then, the specificities of the plant cell are explained (cell wall, vacuoles, plastids). Plant histology and anatomy are described, dwelling on the usefull characteristics for plant drugs identification. Then the specificities of plant life style (nutrition, photosynthesis), life cycle (reproduction) are seen. The second part describes the main chemical classes of natural products (general structure, main uses): primary and secondary métabolites (polyphenols, terpenoïds, alcaloïdes), the improving methods of medical plants and gives some information on plant biotechnology (GMO, cell and tissue in vitro culture , phytohormones, plant regeneration from calls) The last part is devoted to Floristic and the systematic description of the main botanical families of medicinal or toxic plants (morphologie, main drugs and uses) The practical knowledge is important: tutorials are organised to analyse cross-sections of medicinal plants; to learn the use of a flora and to make an herbal; seminars are organised too to learn the identification of mushrooms; a botanical garden (400 species of médicinal plants) is at teir disposal and guided tours are organised
Cycle and year of study :	> Bachelor in Pharmacy > Bachelor in Biomedicine
Faculty or entity in charge:	FARM