UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

dipartimento di farmacia-scienze del farmaco

General information	
Academic subject	***Vegetal Biology*** ***(Vegetal Biology and Pharmacognosy)***
Degree course	*Pharmaceutical Chemistry and Technology*
Year of study	*2nd*
European Credit Transfer and Accumulation System (ECTS)	5
Language	*Italian*
Academic Year	*2022-2023*
Academic calendar (starting and ending date)	*November 2022-January 2023*
Attendance	*Yes*

Professor/ Lecturer	
Name and Surname	**MARIA PIA ARGENTIERI**
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Department and address	Pharmacy-Drug Science, Bari
Virtual headquarters	-
Tutoring (time and day)	Mon-Thu-Fri 10-11.30

Syllabus	
Learning Objectives	The course is mainly aimed at the study of living beings, in particular plant ones. During the course, topics will be addressed aimed at understanding how each single biological process fits into a larger picture, for example at the level of a cell and then of an entire organism.
Course prerequisites	The requirements for students wishing to enroll in the three-year degree course in Science and Technology of herbal and health products are: Mathematics (proportions, percentages, roots, powers, logarithms, equivalences, first degree equations); Physics (physical quantities, units and systems of measurement); Chemistry (Periodic system of elements, substances, elements, mixtures and compounds, the concept of chemical reaction, changes of state).
Contents	Introduction to Vegetal Biology. Importance of the plants. Comparison between animals and vegetables **Cell** - Animal cell versus e Vegetable cell. - Cell wall: functions, chemical composition - Cell wall modifications. - Plant cell structures: Vacuole, Plastids: Structure and function **Tissues** Meristematic tissue Parenchyma Sclerenchyma Collenchyma Vascular tissue Secretory tissue Protective tissue **Organography** Root (Origin and development)

	Stem (Origin and development) Leave Seed Flower Fruit Plant metabolism: Photosynthesis Classification of vegetable organisms.
Books and bibliography	Evert R., Eichhorn S.- ***La biologia delle piante di Raven***- (settima edizione) Ed. Zanichelli Senatore F.- ***Biologia e Botanica farmaceutica***- (seconda edizione) Ed. Piccin Hillis D., Sadava D., Heller C., Price M.- ***Fondamenti di Biologia*** – Ed. Zanichelli Morris J., Hartl DL., Knoll R.A., Michael M. – **Biologia, Come funziona la vita-Piante e Funghi –** Ed. Zanichelli
Additional materials	----------

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
125	*40*		*85*
ECTS			
5	*5*		

Teaching strategy	Lectures in the classroom
Expected learning outcomes	
Knowledge and understanding on:	○ General aspect of Vegetal Biology
Applying knowledge and understanding on:	○ Ability to classify and identify vegetal organisms
Soft skills	• *Making informed judgments and choices* ○ Development and practice of specific protocol for the identification of vegetal drugs • *Communicating knowledge and understanding* ○ Communication about knowledge • *Capacities to continue learning* ○ Information useful for future studies

Assessment and feedback	
Methods of assessment	In itinere exemptions and final oral exam
Evaluation criteria	• *Knowledge and understanding* ○ 50% of final mark expressed out of thirty • *Applying knowledge and understanding* ○ 20% of final mark expressed out of thirty • *Autonomy of judgment* ○ 10% of final mark expressed out of thirty • *Communicating knowledge and understanding* ○ 10% of final mark expressed out of thirty

	• *Communication skills* ○ 10% of final mark expressed out of thirty
Criteria for assessment and attribution of the final mark	The final grade is awarded out of thirty. The exam is passed when the grade is greater than or equal to 18. To achieve a high evaluation, the student must have developed autonomy of judgment and adequate capacity for argumentation and presentation
Additional information	----------