

## **BOTANY (Environmental engineering, I-st Year of study, I-st Semester)**

**Credit value (ECTS) 3**

### **Course category**

Domain (Imposed), H.M.S.108

### **Course holder:**

**Assist. Prof. Dr. Paraschiv Nicoleta Luminita**

### **Discipline objectives (course and practical works)**

The course aims to provide students with studying various aspects of plant organs, morphologically and anatomically, point of view. Training of the students of the main taxa in our country. It aims to promote a positive attitude in the field knowledge of this discipline, in the sense of attracting students for a level of study to high standards by applying the newest information and equipment in the field.

### **Contents (syllabus)**

<b>Course (chapters/subchapters)</b>
<b>The object of study, the history and the importance of botany</b>
<b>General notions on the histology of vegetable</b>
<b>The morphology and anatomy of vegetative organs and of multiplication of the plants</b>
<b>Root and stem</b> : morphology and anatomy
<b>Leaf and flower</b> : morphology and anatomy
<b>Fruit and seed</b> : morphology and anatomy
Gymnospermatophyta: Pinaceae Family
Angiospermatophyta
- <b>Dicotyledonatae</b> : Magnoliaceae, Lauraceae, Ranunculaceae, Berberidaceae, Papaveraceae, Ulmaceae, Moraceae, Urticaceae, Betulaceae, Fagaceae, Aceraceae, Hippocastanaceae, Vitaceae, Euphorbiaceae, Loranthaceae, Apiaceae, Amaranthaceae, Chenopodiaceae, Polygonaceae, Hypericaceae, Violaceae, Brassicaceae, Salicaceae, Tiliaceae, Malvaceae, Primulaceae, Rubiaceae, Oleaceae, Convolvulaceae, Cuscutaceae, Boraginaceae, Solanaceae, Scrophulariaceae, Orobanchaceae, Lamiaceae, Campanulaceae, Asteraceae, Poaceae Family
- <b>Monocotyledonatae</b> : Liliaceae, Amaryllidaceae, Iridaceae, Orchidaceae, Gramineae, Araceae Family

<b>Practical works</b>
<b>Presentation of the laboratory of Botany : work safety rules; Laboratory equipment and utensils; good practice working in botany</b>
<b>Optical microscope</b> . Presentation and working practices
<b>Tissues vegetable</b>

<b>Root</b> : morphology and anatomy
<b>Stem</b> : morphology and anatomy
<b>Leaf</b> : morphology and anatomy
<b>Flower</b> : morphology and anatomy
<b>Fruit</b> : morphology and anatomy
Gymnospermatophyta: Pinaceae Family
Angiospermatophyta
<b>1. Dicotyledonatae:</b> Magnoliaceae, Lauraceae, Ranunculaceae, Berberidaceae, Papaveraceae, Ulmaceae, Moraceae, Urticaceae, Betulaceae, Fagaceae, Aceraceae, Hippocastanaceae, Vitaceae, Euphorbiaceae, Loranthaceae, Apiaceae, Amaranthaceae, Chenopodiaceae, Polygonaceae, Hypericaceae, Violaceae, Brassicaceae, Salicaceae, Tiliaceae, Malvaceae, Primulaceae, Rubiaceae, Oleaceae, Convolvulaceae, Cuscutaceae, Boraginaceae, Solanaceae, Scrophulariaceae, Orobanchaceae, Lamiaceae, Campanulaceae, Asteraceae, Poaceae Family
<b>2. Monocotyledonatae:</b> Liliaceae, Amaryllidaceae, Iridaceae, Orchidaceae, Gramineae, Araceae Family
<b>Final colloquium of knowledge evaluation</b>

### Bibliography

1. Sirbu C., 2020-*Botanica, Morfologie si anatomie, Ed. Ion Ionescu de la Brad, Iasi*
2. Alexiu V., 2000- *Morfologia și anatomia plantelor*, Ed. Culturală Pitești.
3. Niță Mihaela, Rodica Rugină, Lăcrămioara Ivănescu, Naela Costică, Toma C., 1997 *Morfologia și anatomia plantelor, editia 1*, Ed. Univ. "Al. I. Cuza" Iași
4. Turenschi E., Pascal P., Sirbu C., Paraschiv Luminița-Nicoleta, 1998 -*Botanică.-Lucrări practice*-Univ. Agron. Iași.
5. Zanoschi V., Toma M., 1990 - *Curs de Botanică. Partea I -a, Anatomie și Morfologie*. Inst. Agron. Iași

### Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Oral examination	60%
Appreciation of the activity during the semester	Write assessment during the semester, verification tests and final laboratory colloquium.	40%

### Contact

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