**Botany (Ist Year of study, Ist Semester)**

**Credit value (ECTS) 5**

**Course category**

Basic discipline (compulsory)

**Discipline code** A.EMIAIA.F105

**Course holder**

**Lecturer PhD. Mariana HUŢANU**

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

The course aims to provide students the theoretical basis of the plant morpho-anatomy and plant systematics, and to form basic skills to act autonomously in observing, analyzing, interpreting and finding concrete solutions in the field of botany.

Practical works seek to familiarize students with the technical work in the laboratories of botany, in order to know the structure and the role of plant cells and tissues, the structural and functional organization of the vegetative and generative organs of plants, as well as the direct observation and knowledge of the main species of some families of vascular plants, representative for the flora of Romania.

**Contents**

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| **Course (chapters/subchapters)** |
| I.Plant cell. |
| II.Plant tissues. |
| III.Morphology and anatomy of plant organs. |
|  1.Vegetative organs of plants. 2.Plant multiplication. Generative organs of plants.  |
| IV.Plant systematic and taxonomy: classification systems, taxonomic categories (taxa), scientific names. |
| V. Curiosities from the world of plants.  |
| VI.Kingdom *Plantae*: phylums *Bryophyta, Polypodiophyta* and *Pinophyta*. |
| VII.Phylum *Magnoliophyta*: 1.Class *Magnoliopsida (Dicotyledonatae)*: subclasses *Rosidae, Dilleniidae, Asteridae.* 2.Class *Liliopsida (Monocotyledonatae)*: subclass *Liliidae.* |

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| **Practical works** |
| 1.Optical microscope. Observation of living cells of onion (*Allium cepa*). |
| 2.Plant tissues: protective tissues and conductive tissues.  |
| 3.Root morphology. |
| 4.Stem morphology.  |
| 5.Leaf morphology and anatomy. |
| 6.The flower and inflorescences. |
| 7.Fruit and seed. |
| 8.Phylum *Magnoliophyta*: family *Rosaceae*.  |
| 9.Family *Fabaceae*. |
| 10.Family *Brassicaceae*. |
| 11.Families *Solanaceae, Lamiaceae*.  |
| 12.Family *Asteraceae.*  |
| 13.Family *Liliaceae*. |
| 14.Family *Poaceae*.  |

**References**

1.**Ciocârlan V., Berca M. & colab.,** 2004 – *Flora segetală a României,* Bucureşti.

2.**Grau Marga,** 2006 – *Plante cu flori în decursul anotimpurilor,* Sibiu.

3.**Huţanu Mariana**, 2015 – *Mediul şi conservarea durabilă a biodiversităţii,* Iaşi.

4.**Săvulescu Elena**, 2013 – *Sistematica plantelor*, Bucureşti.

5.**Sîrbu C.,** 2020 – *Botanica. Morfologia şi anatomia plantelor,* Iaşi.

6.**Sîrbu C. & Paraschiv Luminiţa Nicoleta**, 2005 – *Botanică sistematică*, Iaşi.

7.**Sârbu I., Ştefan N. & Oprea A.,** 2013, *Plante vasculare din România,* Bucureşti.8.**Şerbănescu-Jitariu Gabriela & Toma C.,** 1980, *Morfologia şi anatomia plantelor,* Bucureşti.

9.**Turenschi E., Pascal. P. & colab.,** 1998,*Lucrări practice-Botanica,* Litogr. USAMV Iaşi.10.**Zanoschi V. & Toma M.,** 1990, *Curs de Botanică, Partea I-a. Anatomie şi Morfologie,* Litogr. Inst. Agr., Iaşi.

**Evaluation**

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| **Evaluation form** | **Evaluation Methods** | **Percentage of the final grade** |
| Exam | Written evaluation  | 80% |
| Appreciation of the activity during the semester | Oral assessment during the semester and verification tests, including active participation in learning activities  | 20% |

**Contact**

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