UE 1 Biodiversity / Bio-evolution of Plant, Fungal, and Animal Kingdoms

5 ECTS

Content

Module 1: Biodiversity and bio-evolution of Plant kingdom

Classes
- Plant cell
- Morphological and anatomical description of the vegetative and reproductive systems
- Plant development and transgenic plants
- Major biogeochemical cycles (carbon cycle, nitrogen cycle)
- Concept of species and systematic classification, evolutionary theories
- Description of the plant families for food, cosmetic, and pharmaceutical use

Tutorials
- Bio-evolution of Plant kingdom, ecological, economic, and pharmaceutical importance of algae, mosses, ferns, conifers, and flowering plants
- Illustrated organography of the plant unit and the reproductive system of flowering plants

Practical works
- Tissue organization of the stem and introduction to plant histology
- Highlighting secondary tissues of some secretory tissues and specific anatomical structures in the stem
- Illustrated organography of the plant unit and the reproductive system of flowering plants
- Recognition of herbal drugs (observation, macroscopic identification, and recognition)

Module 2: Biodiversity and natural substances

Classes
- Why do living organisms produce natural substances?
- The secondary metabolism from a chemical point of view, comparison with the large pathways of biochemistry
- Major classes of natural substances
- The major assumptions of prebiotic chemistry

* Classes (all students in amphitheater), Tutorials (small groups of students), Practical works (smaller groups of students in order to study in adapted practical rooms/laboratories).

Assessment

Final exam about classes and tutorials.
Continuous assessment for the practical works with report writings, oral presentations and/or lectures.
Attendance to practical works needs to be approved.

Contacts

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