

UE4 : Biology & Biotechnology of seed & plant propagation material



Niveau
d'étude
BAC +5 /
master



ECTS
6 crédits



Composante
Faculté des
sciences

En bref

- › Langue(s) d'enseignement: Français
- › Ouvert aux étudiants en échange: Oui

Présentation

Description

- Biology, quality and conservation of pollen
- Seed development and acquisition of seed quality
- Seed structure and morphology
- Physiology of crop seed germination and dormancy
- Physiology of seedling emergence
- Weed seed ecology: seed banks, dissemination and history of life traits
- Biology of transplants and clonal material (bulbs, corms, tubers, rhizomes)
- Physiology of grafting and rhizogenesis
- In vitro culture: callogenesis, organogenesis, somatic embryogenesis, plant conformity
- Emerging strategies: update on genome editing, diagnostic tools,
- GMOs: Regulations, certification, environmental security, international policies
- Journal Club: how to write, read and critically evaluate a scientific article

Heures d'enseignement

CM	Cours magistral	36h
TD	Travaux dirigés	15h
TP	Travaux pratique	15h
TPERSO	Travail personnel	14h

Pré-requis obligatoires

- Knowledge of plant physiology, molecular biology and biochemistry, cell biology
- Knowledge of plant developmental physiology
- Basic knowledge of seed biology
- Describe the main roles of growth regulators
- Read and understand a scientific article in English
- Report and discuss experimental results in scientific form

Compétences visées

- To have an integrative vision of the biological mechanisms regulating dissemination and multiplication of plants in order to improve both production methods and quality of seeds and plant propagating material in an industrial setting
- To be able to understand the benefits and limits of biotechnology for seed and plant propagation sectors
- To be able to evaluate the potential of in vitro culture for producing quality plants
- To be able to report and discuss experimental results in scientific ways and critically analyze the literature on the topic.

Infos pratiques

Lieu(x)

› Angers

Campus

› Campus Belle-beille