



SH03051: BIOTECHNOLOGY IN PLANT BREEDING (CNSH TRONG CHỌN TẠO GIỐNG CÂY TRỒNG)

Credits: 2 credits (Lecture: 2 – Practice: 0)

EXPECTED LEARNING OUTCOMES

Course objectives	COURSE EXPECTED LEARNING OUTCOMES After successfully completing this course, students are able to	Expected learning outcomes of program
Knowledge		
CELO1	Application of Biotechnological methods in plant breeding	ELO2
	Based on knowledge on biotechnology in plant breeding to develop new knowledge in the same field and study in higher education	ELO4
Skills		
CELO2	Utilization of knowledge on tissue culture technology, molecular biology for characterization, conservation, development and multiplication in breeding program for.	ELO6
Personal autonomy and responsibility		
CELO3	To act professionally, lawfully, honestly and responsibly to ensure that risks and hazards are minimized, and biological ethics must be respected.	ELO15

CONTENT

- C.1: Concept of variety and plant genetic resource.
- C.2: Principle of conventional breeding.
- C.3: Development and production of crop.
- C.4: History of application of biotechnology in plant breeding.
- C.5: Tissue culture and crop improvement.
- C.6: Detection of target gene by DNA marker .
- C.7: PCR technique development based on RFLP
- C.8: DNA marker technology.
- C.9: genetic engineering in plant.
- C.10: Protein and enzyme analysis in plant breeding.

LEARNING METHODS

- Read lecture notes, books and references before attending the class.
- Students are required to listen to lectures in class and perform other learning activities such as solving practice problems after class.
- Prepare and actively participate in discussion.



STUDENT TASKS

- Attendance: Students are required to attend at least 2/3 of the total theory lectures of the course.
- Preparation for the lecture: Students are required to read lecture notes, text books and references before attending the class.
- Group discussion and presentation: Students are required to engage in group discussion.
- Mid-term exam: Students miss a mid-term will be given a mark of zero.
- Final exam: Students must take the final exam and meet requirements.
- For online learning: Students need to install online learning software and fulfill the requirements for online learning.

ASSESSMENT METHODS

- Attendance: According to regulations of VNUA.
- Exercise and progress tests: Students must complete the exercises, 15-minute tests, group discussion and presentation with satisfied results.
- Mid-term exam: Midterm exam is 50 minutes long with a 50-question quiz.
- Final exam: Final exam is 50 minutes long with a 50-question quiz.
- For online evaluation: Students need to install software and fulfill the requirements for online evaluation.
- Grading: 10/10 marks, weighting:
 - ✓ Attendance: 10 %
 - ✓ Formative assessment: 30%
 - ✓ Final exam: 60%



LECTURERS

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