



# SH02006: MOLECULAR BIOLOGY I LAB (THỰC HÀNH SINH HỌC PHÂN TỬ I)

Credits: 1 credit (Lecture: 0 – Practice: 1)



## EXPECTED LEARNING OUTCOMES

Course objectives	COURSE EXPECTED LEARNING OUTCOMES After successfully completing this course, students are able to	Expected learning outcomes of program
<b>Knowledge</b>		
CELO1	Analyze the demands and the requirements of DNA, RNA and protein for implementing in the management, production and business related to biotechnology.	ELO2
<b>Skills</b>		
CELO2	Perform fluently the fundamental and advance procedures used in molecular biology	ELO11
<b>Personal autonomy and responsibility</b>		
CELO3	Act professionally and up-to-date the knowledge/ new sights in biotechnology	ELO15

## CONTENT

- Assembling double helix structure model of DNA molecule
- DNA extraction and visual observation of the precipitated DNA molecule from the sample selected by the student group (from plants: banana, strawberry, onion, grapes ...; or from animals: pig liver, chicken blood ...).
- Determine the absorption spectra and the maximum absorption wavelength of the DNA and protein solution at 220-320 nm, use a spectrophotometer to build a calibration curve and measure the concentration of DNA in the solution.

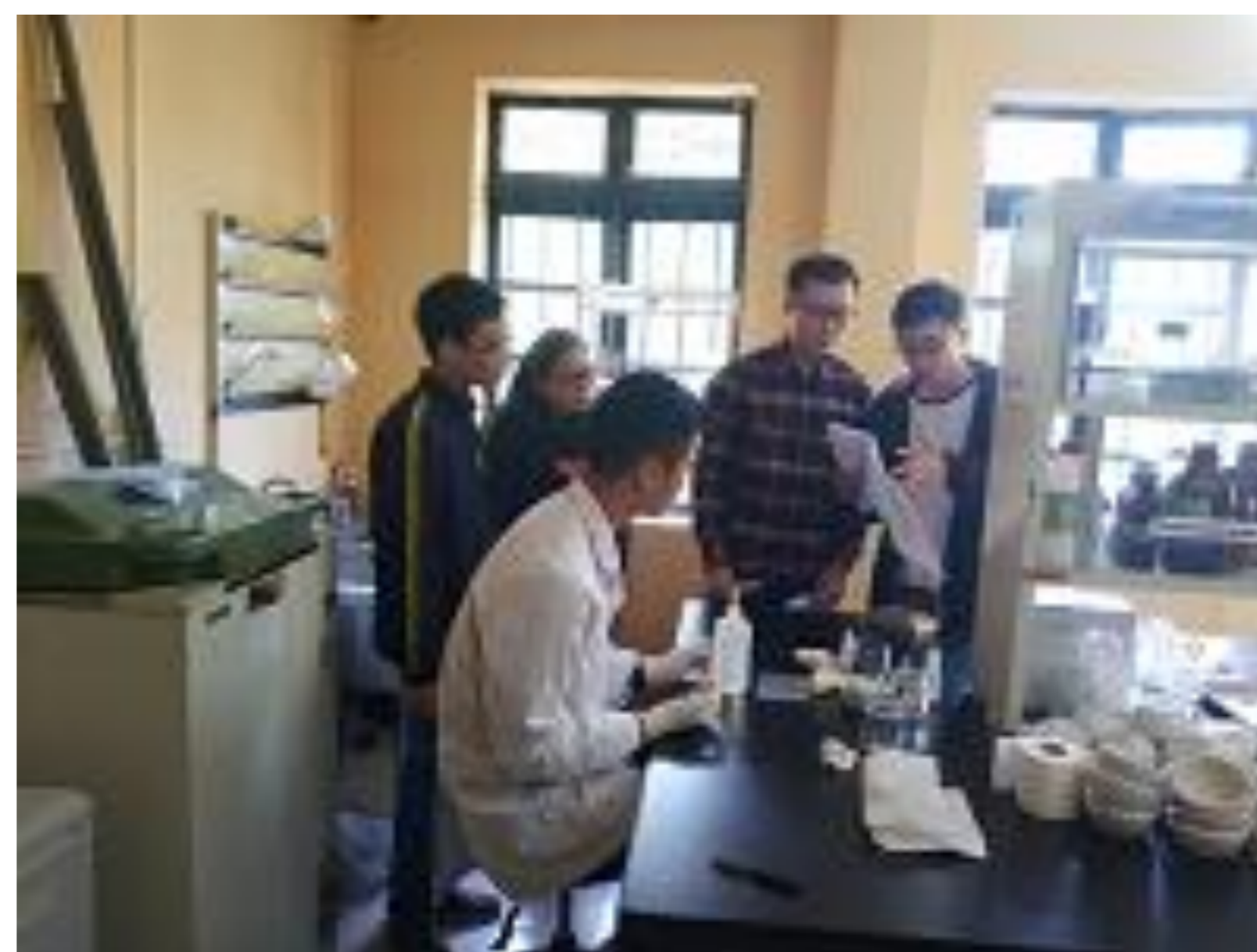


## LEARNING METHODS

- 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

- To strictly follow the rules of VNUA for study. If student misses one class, he/she cannot be approved for the final test.
- Actively participate in the class, rise the questions and effectively response in the discussion.
- To write the report for each topic and submit in-time.
- To be required to take note, read and prepare other study documents each class.
- To be required to take the final test and fulfill the requirements for the test.
- 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.
- Grading: 10 marks
- Weighting:
 

✓ Presentation content	10%
✓ Presentation skills	10%
✓ Answer questions and discuss	10%
✓ Attitude to participate in practice	30%
✓ Results of the experiment	30%
✓ Experiment report	10%



## LECTURERS

- Professor. PhD. Phan Hữu Tôn, [phanhuuton@yahoo.com](mailto:phanhuuton@yahoo.com)
- Associate Professor. PhD. Nguyễn Đức Bách, [ndbach@vnua.edu.vn](mailto:ndbach@vnua.edu.vn)
- PhD. Phạm Thị Dung, [ptdung.cnsh@vnua.edu.vn](mailto:ptdung.cnsh@vnua.edu.vn)
- Msc. Nguyễn Quốc Trung, [nqtrung@vnua.edu.vn](mailto:nqtrung@vnua.edu.vn)
- Msc. Trịnh Thị Thu Thủy, [ttthuy@vnua.edu.vn](mailto:ttthuy@vnua.edu.vn)