

# SH03059: NANOTECHNOLOGY-PRINCIPLES AND APPLICATIONS

## (CÔNG NGHỆ SINH HỌC NANO-NGUYÊN LÝ VÀ ỨNG DỤNG)

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
<b>Knowledge</b>		
CELO1	Distinguish the concepts of nanomaterials, nanotechnology, and nano biotechnology; Classification of nanomaterials; analyzing the characteristic properties of nanomaterials.	ELO4.
CELO2	Explain the scientific basis of fabrication methods of nanomaterial	ELO4.
CELO3	Analyze application direction and prospects of nano biotechnology in cultivation, animal husbandry, fisheries, biological research and medicine and pharmacy.	ELO4.
<b>Skills</b>		
CELO4	Apply nano-biotechnology knowledge to solve related research effectively.	CELO6.
<b>Personal autonomy and responsibility</b>		
CELO5	Chủ động học tập, tích lũy kiến thức để nâng cao năng lực và trình độ chuyên môn.	ELO15.

### CONTENT

Chapter 1: An overview of nano biotechnology  
Chapter 2: Fabrication of nanomaterials  
Chapter 3: Application of nano biotechnology in cultivation.  
Chapter 4: Application of nanotechnology in livestock and aquaculture.  
Chapter 5: Application of nano-biotechnology and Medicine-Pharmacy research.

### 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, textbooks 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.

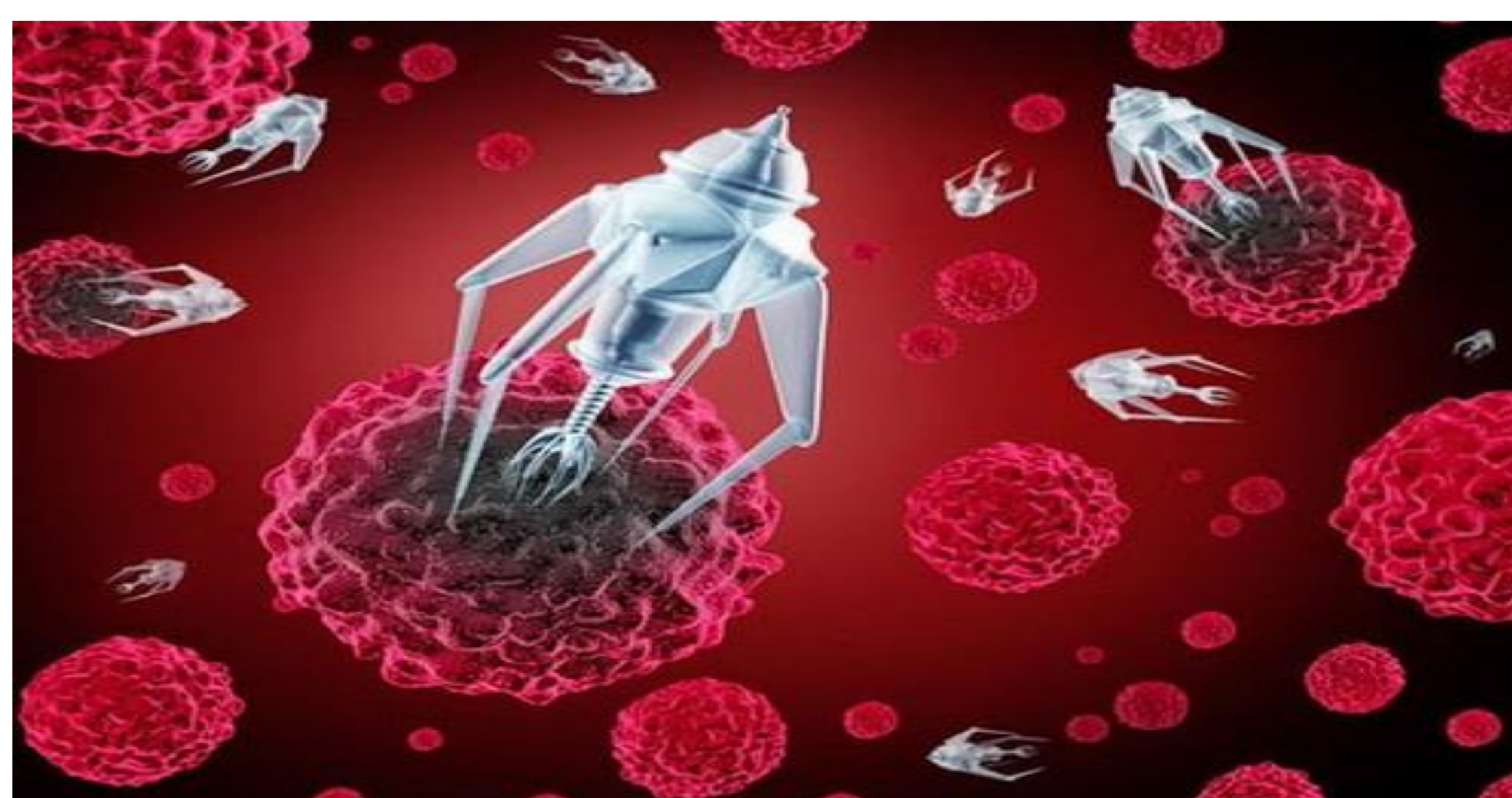


### LEARNING METHODS

- Read lecture notes, books and references before attending the class.
- Listen to lectures in class
- Perform other learning activities such as answering questions, doing exercises, discussing in groups.

### ASSESSMENT METHODS

1. Scale: 10
2. Weighting : The course mark is the sum of the rubric scores multiplied by the respective weight of each rubric
  - Class attendance: 10%
  - Discussion: 10%
  - Mid-term test score: 20%
  - Final exam: 60%



### LECTURERS

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2. Ph.D. Bui Thi Thu Huong. 0968092528, [Btthuonghp@gmail.com](mailto:Btthuonghp@gmail.com)