SH03005 : APPLIED BIOINFORMATICS

(TIN SINH HỌC ỨNG DỤNG)

Credits: 2 credits (Lecture: 2 – Practice: 1)

EXPECTED LEARNING OUTCOMES

Notation	Course expected learning outcomes After successfully completing this course, students are able to	Program expected learning outcomes
Knowledge		
CELO1	Analyze Bioinformaticss data for industry management, production and business;	ELO2
CELO2	Design modelling and statistical analysis for production in biotechnology.	ELO5
Skills		
CELO3	Utilize information technology and equipment effectively for management, production, and sales in the field of biotechnology.	ELO9
CELO4	Apply skills to collect, analyze and process information about DNA sequences, proteins... for scientific research.	ELO10
Attitude		
CELO5	Actively update and accumulate knowledge and experience to improve professional qualifications	ELO15

CONTENT

- Chapter 1: Introduction to Bioinformatics
- Chapter 2: Biological basis of bioinformatics
- Chapter 3: Internet and assisted tools for searching study materials
- Chapter 4: Biological databases
- Chapter 5: Sequencing and sequence submission; Genome browsers
- Chapter 6: Get familiar with biological database analysis tools
- Chapter 7: Datamining and data analysis
- Chapter 8: Softwares for biological data analysis

LECTURERS

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STUDENT TASKS

- Attendance: All students attending this module must attend properly and fully according to the current regulations on teaching and learning under the current credit system of VNUA.
- Preparation for the lecture: Students are required to read lecture notes, text books and references before attending the class.
- Practice in class: students who fully participate in the exercises, missing 1 session or more are not eligible for exams.
- Mid-term exam: Students must take 01 mid-term test.
- 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

- Grading: 10 marks
- Weighting:
  - ✓ Attendance: 10 %
  - ✓ Formative assessment: 30%
  - ✓ Final exam: 60%

LEARNING METHODS

- Self-study: 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 making question and discussion in the class
- Join all the practice lessons
- Team working
- Online study

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