

SUBJECT OUTLINE DETAILS

1. Subject: BIOTECHNOLOGY SEMINAR V (CHUYÊN ĐỀ CNSH V)

- Code: BT299C
- Credits: 2
- Hours: 18 theory hours including virtual video lectures, 12 hours for case study, seminar and discussion hours

2. Management Unit:

- Department: Microbial Biotechnology
- Faculty/Institute: Biotechnology Research and Development Institute

3. Prerequisites: Biotechnology Seminar I, II, III, IV

4. Subject objectives:

4.1. Knowledge:

- 4.1.1. Strengthening the understanding about the presentation basics and expression of the research interest.
- 4.1.2. Updating the scientific findings and on-going research activities of Biotechnology related majors.
- 4.1.3. Learning for the enrichment of the scientific terms and vocabularies of the Biotechnology field.
- 4.1.4. Learning for preparation of research proposal, scientific report, article, and detailed summary of graduation thesis.

4.2. Skill:

- 4.2.1. Being able to design and give presentation of the specific research proposal, as well as prepare detailed summary of graduation thesis.
- 4.2.2. Being able to apply the gained knowledge to update information of scientific findings particularly in the context of the application of biotechnology.
- 4.2.3. Having skills to use and to apply informatic technology in study and research. Having ability for team work, writing and presenting seminar.
- 4.2.4. Having skills of communication, presentation, learning, and research in terms of specializations relating to biotechnology in English.

4.3. Attitude:

- 4.3.1. Having a sense of serious and diligent self-study.
- 4.3.2. Having effort, active study, inquiring mind and solidarity spirit.
- 4.3.3. Having honesty and responsibility.

5. Brief description of subject content:

The main contents of a subject including: introduction of representative research topics at the advanced level referring the biotechnology major; the update scientific findings and on-going research activities of Biotechnology related majors; guidance for preparation of research proposal, scientific report, article, and detailed summary of graduation thesis; virtual lectures; enrichment (including meaning and pronunciation) of the scientific terms and vocabularies in the context of the Biotechnology field; individual designed research proposal and oral presentation at the advanced level.

6. Subject content structure:

| | Content | Hours | Objectives |
|----------------|---|-----------|------------------------------------|
| Part 1. | Introductory talks | 3 | |
| 1.1. | Introduction about the course and the specialized research groups in BiRDI | | 4.1.1; 4.1.2 4.2.2; 4.3 |
| 1.2. | The update scientific findings and on-going research activities of Biotechnology related majors | | 4.1.1; 4.1.2 4.2.2; 4.3 |
| Part 2. | Guidance for scientific presentation and publication | 12 | |
| 2.1. | Instruction and preparation of research proposal, research grant application | | 4.1.1; 4.1.2 4.1.4; 4.2; 4.3 |
| 2.2. | Instruction and preparation of scientific report and article | | 4.1.1; 4.1.2 4.1.4; 4.2; 4.3 |
| 2.3. | Instruction and preparation of detailed summary of graduation thesis | | 4.1.1; 4.1.2 4.1.4; 4.2; 4.3 |
| 2.4. | Model and specific examples of research proposal, research grant application and detailed summary | | 4.1.1; 4.1.2 4.1.4; 4.2; 4.3 |
| Part 3. | Study of the scientific terms and vocabularies in the Biotechnology major | 3 | |
| 3.1. | Meaning, definition | | 4.1.3; 4.2.4; 4.3 |
| 3.2. | Pronunciation | | 4.1.3; 4.2.4; 4.3 |
| Part 4. | Case study and assignment of presentation | 12 | |
| 4.1. | Case study of research proposal and student designed presentation | | 4.1.1; 4.2; 4.3 |
| 4.2. | Individual oral presentation of research proposal, discussion, questions and answers | | 4.1.1; 4.2; 4.3 |

7. Teaching method:

- lecture (including virtual video lecture)
- case study
- seminar presentation
- discussion

8. Duties of student:

Students have to do the following duties:

- Attend in class at least 80% theory hours. Ask permission of lecturer in advance for any absence.
- Pre-study materials before coming to class (based on syllabus and references)
- Implement group seminar assignments and get the result assessment.
- Organize actively for self-study hours.
- Attend seriously the final written exam and submit of task as assigned.

9. Assessment of student learning outcomes:

9.1. Assessment

| No. | Point components | Rules and Requirement | Weights | Objectives |
|-----|--------------------------------|---|---------|---------------|
| 1 | Diligen and active study | - Hours of attendance - Active participation and discussion in class | 5% | 4.3 |
| 2 | Individual and oral assignment | Seminar presentation, discussion and assessment of implementation results | 25% | 4.1; 4.2; 4.3 |
| 3 | Final exam result | Serious implementation for written exam, submission of task as assigned | 70% | 4.1; 4.2; 4.3 |

9.2. Grading

- Grading components and final test scores will be marked on a scale of 10 (0 to 10), rounded to one decimal place.
- Subject score is the sum of all the components of the evaluation multiplied by the corresponding weight. The subject score is marked on a scale of 10 and rounded to one decimal place, then is converted to A-B-C-D score and score on a scale of 4 under the academic provisions of the University.

10. Materials:

| Materials information | Code number |
|--|--|
| [1] Basic biotechnology (0 521 77074 2) / Colin Ratledge; revised by Colin Ratledge, Bjorn Kristiansen: Cambridge, 2001, 0 521 77074 2.- 660.62/ B311 | MON.102641 |
| [2] Food Fermentation- Part 1 / Tjakko Abee [et. al.] ; editor: Siemen Schoustra.- Netherland: Wageningen Agricultural, 1999.- 197 tr. ; ill., 30 cm.- 664/ F686/P.1 | <u>DIG.000137;</u> <u>CNSH.000159</u> |
| [3] Microbial biotechnology Fundamentals of applied | CNSH |

| Materials information | Code number |
|---|--|
| microbiology / Alexander N Glazer, Hiroshi Nikaido.- 1st.- New York: W. H. Freeman, 1994, 662p., 0 7167 2608 4.- 660.62/ G553 | |
| [4] Agricultural biotechnology in developing countries / John Komen, Gabrielle Persley.- The Netherland: ISNAR, 1993, 45p., 92 9118 011 9.- 630.274/ K81 | <u>NN.013578</u> |
| [5] Biotechnology in the food industry / M P Tombs.- 1st.- Milton Keynes: Open Univ, 1990, 189p., 0 471 93276 0.- 644/ T656 | CNSH |
| [6] Biotechnology research and applications / J. Gavora ... [et al.]. London: Elsevier applied science, 1988.- 321p., 24cm, 1851062707.- 660.6/ B615 | <u>CN.001851</u> |
| [7] Environmental biotechnology / ALAN SCRAGG.- 1st.- Edinburg Gate, England: Longman, 1999, 249p, 0 582 27682 9.- 628.5/ S433 | <u>NN000273</u> |
| [8] Applied plant biotechnology / Applied plant biotechnology; Biên tập, hiệu đính: V L CHOPRA ...[et al.]- 1st.- Enfiel, New Hampshire: Science, 1999, 384p, 1 57808 033 9.- 630/ A648 | <u>NN000250</u> |
| [9] Food, fermentation, and micro-organisms / Charles W. Bamforth.- Oxford: Blackwell Science, 2005.- 216 p., 25 cm, 9780632059874.- 664.024/ B199 | <u>MT.000046</u> |
| [10] Handbook of fermented functional foods / Edited by Edward R. Farnworth.- Boca Raton, FL.: CRC Press, 2003.- 390 p., 25 cm (Functional foods and nutraceuticals), 0849313724.- 613.28/ H236 | <u>NN.004106;</u> <u>MON.014059</u> |
| [11] Food Microbiology / Ngo Thi Phuong Dung, Huynh Xuan Phong – Syllabus (in English). Can Tho University Publishing House, 2013.- 219 p., 16x24 cm, 05/QĐ-NXB.ĐHCT. | CNSH.029 |
| [12] Graduate theses of undergraduate and graduate students in Biotechnology | CNSH |

11. Self-study Guide:

| Week | Content | Theory / Seminar (hours) | Students' duties |
|-------------|--|---------------------------------|--|
| 1 | Part 1: Introductory talks 1.1. Introduction about the course and the specialized research | 3 | - Pre-study handouts and materials: depend on the topics of specialization. - Refer relevant information from materials, and handouts (ppt slides). |

| Week | Content | Theory / Seminar (hours) | Students' duties |
|------|---|--------------------------|--|
| | groups in BiRDI 1.2. The update scientific findings and on-going research activities of Biotechnology related majors | | |
| 2 | Part 2: Guidance for scientific presentation and publication 2.1 Instruction and preparation of research proposal, research grant application | 3 | <ul style="list-style-type: none"> - Pre-study handouts and materials: depend on the topics of specialization. - Refer relevant information from materials, handouts, and graduate theses. |
| 3 | 2.2. Instruction and preparation of scientific report and article | 3 | <ul style="list-style-type: none"> - Pre-study handouts and materials: depend on the topics of specialization. - Refer relevant information from materials, handouts, and graduate theses. |
| 4 | 2.3. Instruction and preparation of detailed summary of graduation thesis | 3 | <ul style="list-style-type: none"> - Pre-study handouts and materials: depend on the topics of specialization. - Refer relevant information from materials, handouts, and graduate theses. |
| 5 | 2.4. Model and specific examples of research proposal, research grant application and detailed summary | 3 | <ul style="list-style-type: none"> - Pre-study handouts and materials: depend on the topics of specialization. - Refer relevant information from materials, handouts, and graduate theses. |
| 6 | Part 3: Study of the scientific terms and vocabularies in the Biotechnology major 3.1. Meaning, definition 3.2. Pronunciation | 3 | <ul style="list-style-type: none"> - Pre-study handouts - Preparation for designed case study and individual oral assignment: presentation of seminar on specific research proposal. |
| 7 | Part 4: Case study and assignment of presentation 4.1. Case study of research proposal and student designed presentation | 3 | Assign specific topic of case study and prepare for research proposal. |
| 8 | 4.2. Individual oral presentation of detailed research proposal, discussion, questions and answers | 3 | Individual oral presentation on detailed research proposal: 10 minutes/presentation, and 3-5 minutes for discussion. |
| 9 | 4.2. Individual oral presentation of detailed research proposal, discussion, questions and | 3 | Individual oral presentation on detailed research proposal: 10 minutes/presentation, and 3-5 minutes for discussion. |

| Week | Content | Theory / Seminar (hours) | Students' duties |
|-------------|--|---------------------------------|--|
| | answers (cont.) | | |
| 10 | 4.2. Individual oral presentation of detailed research proposal, discussion, questions and answers (cont.) | 3 | Individual oral presentation on detailed research proposal: 10 minutes/presentation, and 3-5 minutes for discussion. |

**ON BEHALF OF RECTOR
DEAN/ DIRECTOR**

Can Tho,/...../20...

HEAD OF DEPARTMENT