

Course Syllabus

- 1. Program of Study** Bachelor of Science (Biological Sciences)
Faculty/Institute/College Mahidol University International College
- 2. Course Code** ICBI 211
Course Title General Microbiology
- 3. Number of Credits** 4 (3-2-7) (Lecture/Lab/Self-study)
- 4. Prerequisite (s)** none
- 5. Type of Course** Required
- 6. Semester or Quarter / Academic Year**
 Second trimester/ every academic year
- 7. Course Condition**
 None

8. Course Description

Structure, physiology and ecology of viruses, bacteria, protozoa and fungi, especially bacteria; aspects of microbiology importance in health, sanitation, food processing and industry; practical exercises included.

9. Course Objective (s)

1. Students should distinguish the structures of virus, bacteria, protozoa and fungi.
2. Students should describe the physiology and ecology of these 4 groups of living things.
3. Students should explain the importance of microorganisms in health, sanitation, food processing and industry.

9.Course Outline

week	Topics/Seminar	Hours			Instructor
		Lecture	Lab	Self-study	
1	- Introduction - Host-microbe interaction Lab: Classification of Bacteria I	3	2	7	Dr. Michael Hurt
2	- Chemistry of the gene Lab: Classification of Bacteria II	3	2	7	Dr. Michael Hurt
3	- Bacterial structure and function Lab: Classification of Bacteria III	3	2	7	Dr. Michael Hurt
4	- Bacterial physiology and pathogenicity Lab: Biology of Bacteria I	3	2	7	Dr. Michael Hurt
5	- Host defense and antibiotics Lab: Biology of Bacteria II	3	2	7	Dr. Michael Hurt
6	- Viral structure, replication, and diseases	3	2	7	Dr. Michael Hurt

	Lab: Biology of Bacteria III				
7	- Midterm examination	3	2	7	Dr. Michael Hurt
8	- Immune responses Lab: Finish-up the classification lab	3	2	7	Dr. Michael Hurt
9	- Biology of Fungi Lab: Biology of Fungi	3	2	7	Dr. Michael Hurt
10	- Biology of protozoa and helminthes Lab: Biology of Protozoa	3	2	7	Dr. Michael Hurt
11	- Application of molecular biology and genetic engineering Lab: Biology of Helminth	3	2	7	Dr. Michael Hurt
Final examination					
	Total	33	22	77	

11. Teaching Method (s)

1. Lecture
2. Suggested readings
3. Discussion in class

12. Teaching Media

1. Powerpoint Presentations
2. Texts and teaching materials

13. Measurement and Evaluation of Student Achievement

Student achievement is measured and evaluated by

- 13.1 The ability to distinguish the structures of virus, bacteria, protozoa and fungi.
- 13.2 The ability to describe the physiology and ecology of these 4 groups of living things.
- 13.3 The ability to explain the importance of microorganisms in health, sanitation, food processing and industry

Student's achievement will be graded according to the college and university standard using the symbols: A, B+, B, C+, C, D+, D and F. Students must attend at least 80% of the total class hours of this course.

Ratio of mark

1. Mid-term examination	35%
2. Final examination	35%
3. Laboratory practices	30%
Total	100%

14. Course evaluation

- 14.1 Students' achievement as indicated in number 13 above.
- 14.2 Students' satisfaction towards teaching and learning of the course using questionnaires.

15. Reference (s)

1. Nicklin, J., Graeme-Cook, K., Paget, T. and Killington, R. Instant notes in microbiology. UK. BIOS Scientific Publishers. 1999.

2.Greenwood, D., Slack, R.C.B. and Peatherer, J.F. medical microbiology. 16th Edition. UK. Churchill Livingstone. 2002.

16. Instructor (s)

Dr. Michael Hurt

17. Course Coordinator

Dr. Michael Hurt