Course Syllabus

1. Program of Study Bachelor of Science (Biological Sciences)
Faculty/Institute/College Mahidol University International College

2. Course Code ICBI 221
Course Title Animal Biology

3. Number of Credits 4 (3-2-7) (Lecture/Lab/Self-study)

4. Prerequisite *(s)* none

5. Type of Course Required course**;** minor required

6. Trimester/ Academic Year
3rd trimester / every academic year

7. Course Condition
None

8. Course Description
A survey of the animal kingdom with emphasis on function, structure, evolution, and ecology; demonstrations and practical exercises included.

9. Course Objective *(s)*
By the end of this course, students should be able to
1. list the characters that are typical of animals.
2. understand the nature of the different structural traits of animals.
3. describe the main distinguishing features of each of 9 major animal phyla.
4. name and distinguish the main types of animal tissues.
5. identify the ecological organization.
6. describe the component of an ecosystem and understand the energy flow through an ecosystem.
7. recognize the types of relationships among organisms within a community.
8. describe the characteristics of animal population.
9. understand the mechanisms that are involved in maintaining homeostasis.
10. explain the physiological processes of animals which include how the digestive, respiratory, circulatory and excretory systems function.

10.Course Outline

week	Topics/Seminar	Hours			
		Lecture	Lab	Self-study	Instructor
1	-Evolution of animal life	3	2	7	Dr.Vacharobon
2	-The diversity of animal life : -Classification of animals -The invertebrates	3	2	7	Dr.Vacharobon
3	-The vertebrates Lab: Animal diversity and classification	3	2	7	Dr.Vacharobon

4	-Animal architecture : -Types of tissues -Level of organization Lab: Type of animal tissue	3	2	7	Dr.Vacharobon
5	Reviews and MIDTERM EXAMINATION	3	2	7	Dr.Vacharobon
6	-Animal form and function : -Digestion and nutrition -Gas exchange	3	2	7	Dr.Vacharobon
7	-Transport of materials	3	2	7	Dr.Vacharobon
8	-Disposal of metabolic wastes	3	2	7	Dr.Vacharobon
9	-Coordination Lab: Dissection of frog	3	2	7	Dr.Vacharobon
10	-Animal ecology : -Animals and their environment	3	2	7	Dr.Vacharobon
11	Lab: Field Study	3	2	7	Dr.Vacharobon
FINAL EXAMINATION					
	TOTAL	33	22	77	

11. Teaching Method *(s)*

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

12. Teaching Media

Lecture: Transparencies, books, and handouts

Laboratory: Microscopes, dissection sets, live and preserved specimens, and permanent slides

13. Measurement and Evaluation of Student Achievement

Student achievement is measured and evaluated by

13.1 The ability to list the characters that are typical of animals.

13.2 The ability to understand the nature of the different structural traits of animals.

13.3 The ability to describe the main distinguishing features of each of 9 major animal phyla.

13.4 The ability to name and distinguish the main types of animal tissues.

13.5 The ability to identify the ecological organization.

13.6 The ability to describe the component of an ecosystem and understand the energy flow through an ecosystem.

13.7 The ability to recognize the types of relationships among organisms within a community.

13.8 The ability to describe the characteristics of animal population.

13.9 The ability to understand the mechanisms that are involved in maintaining homeostasis.

13.10 The ability to explain the physiological processes of animals which include how the digestive, respiratory, circulatory and excretory systems function

Ratio of mark

Midterm examination 30%

Final examination	60%
Class attendance	10%
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. Enger, E. D., Ross, F. C. and Bailey, D. B. Concepts in biology. 11th Edition. USA.. McGraw-Hill Higher Education. 2005..
2. Hickman Jr., C. P., Roberts, L. S., Larson, A. and I'Anson, H.. Integrated principles of zoology. 12th Edition. USA. McGraw-Hill Higher Education, 2004.
3. Kent, M. Advanced biology. UK. Oxford University Press. 2000.
4. Pechenik, J. A. Biology of the invertebrates. 3rd Edition. USA. Wm. C. Brown Publishers. 1996.
5. Solomon, E. P., Berg, L. R. and Martin, D. W. Biology. 6th Edition. Australia. Brooks/Cole. 2002.
6. Wallace, R.L., Taylor, W.K. and Litton Jr., J.R. Invertebrate zoology: A laboratory manual. 4th Edition. USA. Macmillan Publishing Co. 1989.

16. Instructor *(s)*

Assistant Professor Dr. Vacharobon Thirakhupt

17. Course Coordinator

Assistant Professor Dr. Vacharobon Thirakhupt