Course Syllabus

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

2. Course Code ICBI 322
Course Title Vertebrate Zoology

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

4. Prerequisite *(s)* none

5. Type of Course Elective

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

7. Course Condition
Number of students is 20-30.

8. Course Description
Morphology, physiology, behavior and taxonomy of various vertebrate groups; comparative anatomy in relationship to the evolution of the vertebrates; demonstrations and laboratory exercises included.

9. Course Objective *(s)*
After completing this course, the student should be able to
1. Classify vertebrate using morphological characteristics of each group together with physiological and behavioral characteristic into class, order, family and some common genus and species.
2. Explain evolution of vertebrates in terms of anatomical comparative which is importance to their survivorship.
3. Give common names of some vertebrates that are commonly found in Thailand.
4. Understand researches of vertebrate in Thailand.

10. Course Outline

week	Topics/Seminar	Hours			Instructor
		Lecture	Lab	Self-study	
1	Introduction: Taxonomy and diversity of fish	3	2	7	Naiyana
2	Anatomy and morphology of fish	3	2	7	Naiyana
3	Anatomy and morphology of Amphibian	3	2	7	Wichase
4	Systematics and ecology of Amphibian	3	2	7	Wichase
5	Anatomy and morphology of Reptile	3	2	7	Kumthom
6	Systematics and ecology of Reptile	3	2	7	Kumthom
7	Mid-term examination	3			

8	Anatomy and morphology of Bird	3	2	7	Wina
9	Systematics and ecology of Bird	3	2	7	Wina
10	Anatomy and morphology of Mammal	3	2	7	Art-ong
11	Systematics and ecology of Mammal	3	2	7	Art-ong
12	FINAL EXAM	3			
	Total	36	20	70	

11. Teaching Method *(s)*

1. Lecture
2. Suggested readings
3. Discussion in class
4. Laboratory and field trip

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 classify vertebrate using morphological characteristics of each group together with physiological and behavioral characteristic into class, order, family and some common genus and species.

13.2 The ability to explain evolution of vertebrates in terms of anatomical comparative which is importance to their survivorship.

13.3 The ability to give common names of some vertebrates that are commonly found in Thailand.

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. Minimal passing level is 60%. Student who earns 85% up will have Grade A, 80-84% Grade B+ , 75-79% Grade B, 70-74% Grade C+, 65-69% Grade C, 60-64% Grade D+, 55-59% D, less than 55 Grade F. Students must attend at least 80% of the total class hours of this course.

1. Mid-term examination 40%
2. Final examination 40%
3. Report and Laboratory exam 20%

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. Bond, C.E. Biology of fishes. 2nd Edition..USA. Saunders College Publishing.1996.
2. Gill, Frank B. Ornithology. 2nd Edition. USA. W.H. Freeman and Co.1994.
3. Halliday T. and K. Adler, K. (editors). The firefly encyelopedia of reptiles and amphibians. USA. Firefly Books Ltd. 2002.

4. Lekagul. B. and Mc Neely, J. Thailand. Mammals of Thailand. Kurusapha. 1977.
5. Lekagul, B. and Round, P.D. A Guide to the birds of Thailand. Thailand. Saha Karn Bhaet Co. 1991.
6. Nowak, R. Walker's Mammals of the world. Vol. I, II. USA. John Hopkins University Press. 1991.
7. Orr, R.T. Vertebrate biology. 2nd Edition. USA Saunders. 1955.
8. Robson, C.R. A Field Guide to the birds of Thailand. UK. New Holland, 2002.
9. Vaughan, T.A. Ryan, J.M. and Czaplewski, N.J. Mammalogy. USA. Thompson Learning Inc. 2000.

16. Instructor *(s)*

Assoc. Prof. Naiyana Chaiyabutr
Assoc. Prof. Kumthorn Thirakhupt
Assoc. Prof. Wina Mecvichai
Dr. Vichase Khonsue
Dr. Art-ong Pradatsundarasarn

17. Course Coordinator

Assoc. Prof. Kumthorn Thirakhupt