



## Course Syllabus (Academic Year 2021)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

1. **Course No. and Title:** KACB 345 Invertebrate zoology  
**Credit (study hours):** 3 (2-3-5)
2. **Program Name:** Bachelor of Science in Conservation Biology
3. **Course Module:**  Gen.Edu. course  Core course  Elective course  
**Pre/co-requisite:** KACB215 or received approval from Program Committee
4. **Semester:**  1<sup>st</sup> semester  2<sup>nd</sup> semester  3<sup>rd</sup> semester
5. **Class Schedule & Venue:** Mahidol University, Kanchanaburi Campus
6. **Course Coordinator:** Lect. Paiphan Paejaroen  
Tel. 081-2557694, Email: paiphan.pae@mahidol.edu

### 7. Course Description:

An understanding of taxonomy, morphology, structure, function and evolution of the various invertebrate phyla of animals; laboratory exercises will including the dissection, identification and taxonomic classification, and description of fundamental anatomical traits found within representative phyla.

### 8. Course Objectives / Course Learning Outcomes (CLOs)

No.	Objectives / CLOs	Expected Skills / Knowledge			PLOs
		Specific	Generic	Knowledge	
8.1	Describe a basic understanding of invertebrate diversity				1, 5
8.2	Be able to classify invertebrate taxa				1, 5
8.3	Explain the variety of invertebrate animal body-plans, ecologies, life histories, and reproductive modes				1, 4, 5, 6, 7, 8
8.4	Illustrate laboratory skills in invertebrate zoology				1, 4, 5, 6, 7, 8

### 9. Class Instructor List

9.1	Paiphan Paejaroen	081-255-7694	paiphan.pae@mahidol.edu
9.2	Supatra Chunchob	085-098-9419	supatra.chn@mahidol.edu
9.3	Weerachon Sawangproh	093-339-0526	weerachon.saw@mahidol.edu
9.4	Thanaphat Klubchum	083-422-6797	

10. Course Outline (Lecture \* starts from 9.30-11.30 hrs, \*\* starts from 13.00-15.00 hrs)

(Laboratory + starts from 9.00-12.00 hrs, ++ starts from 13.00-16.00 hrs)

Week	Date	Contents	CLOs	Teaching & Learning	Instructor's Names
<b>Lecture</b>					
1*	13 Aug 21	Protozoans	1, 5	Lecture	Supatra
1**	13 Aug 21	Introduction, Classification	1, 4, 5, 6, 7, 8	Lecture & Assignment 1	Paiphan
2*	20 Aug 21	Platyhelminthes	1, 5	Lecture	Supatra
2**	20 Aug 21	Phyla Porifera, Cnidaria and Ctenophora	1, 5	Lecture & Discussion assignment 1	Paiphan
3*	27 Aug 21	Nematodes and relatives	1, 5	Lecture	Supatra
3**	27 Aug 21	Lophophorates	1, 5	Lecture & Assignment 2	Paiphan
4*	3 Sep 21	Phylum Mollusca	1, 5	Lecture	Weerachon
4**	3 Sep 21	Phylum Annelida & Allied Taxa	1, 5	Lecture	Weerachon
5*	10 Sep 21	Introduction to Phylum Arthropoda, Trilobites, Chelicerates	1, 5	Lecture & Discussion assignment 2	Paiphan
5**	10 Sep 21	Crustacea and others	1, 5	Lecture & Assignment 3	Paiphan
6*	17 Sep 21	No class			
6**	17 Sep 21	Insecta	1, 5	Lecture	Paiphan
7*	24 Sep 21	Echinodermata	1, 5	Lecture	Paiphan
7**	24 Sep 21	Hemichordate & Chordata	1, 5	Lecture	Paiphan
8*,**	1 Oct 21	Preparation for group assignment	1-8	Assignment	Paiphan
9+	Lecture examination (4-8 October 2021)				
<b>Laboratory</b>					
10+	15 Oct 21	Protozoans	1, 4, 5	Group work	Supatra/ Paiphan / Thanaphat
10++	15 Oct 21	Porifera and Cnidaria	1, 4, 5	Group work	Paiphan/ Thanaphat
11+	29 Oct 21	Platyhelminthes and Nematode	1, 4, 5	Group work	Supatra/ Paiphan / Thanaphat

11++	29 Oct 21	Lophophorates	1, 4, 5	Group work	Paiphan/ Thanaphat
12+	5 Nov 21	Mollusca and Annelid	1, 4, 5	Group work	Weerachon / Paiphan / Thanaphat
12++	5 Nov 21	Trilobites, Chelicerates	1, 4, 5	Group work	Paiphan / Thanaphat
13+	12 Nov 21	Crustacea + Insects	1, 4, 5	Group work	Paiphan / Thanaphat
13++	12 Nov 21	Echinoderm + Hemichordate and Chordata	1, 4, 5	Group work Discuss Mini Project 2	Paiphan / Thanaphat
14+,++	19 Nov 21	Presentation	1-8	Presentation	Paiphan / Supatra / Weerachon / Thanaphat
16+, ++	Laboratory examination (29 November – 10 December 2021)				

## 11. Course Assessment

No.	Methods / Activities	Regulations	CLOs	Week	Weight Distribution (%)
11.1	Mid-term and Final examination	3 hours exam (other regulations will be announced in the class later)	1, 5, 6, 7, 8	1-8	50
11.2	Laboratory reports	Will be announced in the class	1, 4, 5	1-8, 10-16	25
11.3	Assignments	Will be announced in the class	1-8	10-14	25
				<b>Total</b>	<b>100</b>

\*\*\* If the students attend in the class less than 80%, they will be announced to disqualification for the course examination. Thus, the unexpected matters bring to an absence in the class, please contact course coordinator to fill in the application form and attached the evidence of absence.

## 12. Grading System

Criterion-referenced evaluation

Grade	Score	Grade	Score	Grade	Score	Grade	Score
A	≥ 80 %	B	70 – 74.99%	C	60 – 64.99%	D	50 – 54.99%
B+	75 – 79.99%	C+	65 – 69.99%	D+	55 – 59.99%	F	< 50 %

Norm-referenced evaluation

\*If use both criterion and norm-referenced evaluation, please tick two boxes.

### 13. References

Hickman, CP, Jr. , Keen, LS, Eisenhour, DJ, Larson, A, l' Anson, H. (2017). Integrated Principles of Zoology. 17th edition. McGraw-Hill Education. pp. 834.

Hickman, CP, Jr., Roberts, LS, Keen, SL., Eisenhour, DJ, Larson, A., and l'Anson, H. (2014). Integrated Principles of Zoology. 16th edition. McGraw-Hill Education. New York. pp. 823.

Hickman, CP, Jr., Roberts, LS and Larson, A. (2004). Integrated Principles of Zoology. 9th edition. Mosby-Year Book, Inc. pp. 983.

Miller, SA, and Harvey JP. (2010). Zoology. 8th edition. McGraw Hill. 592 pp.

Romoser, W.S. and J.G. Stoffolano Jr. (1994). *The science of entomology* (3<sup>rd</sup> ed.). Wm.C. Brown Company Publishers.

Pechnick, JA. (1996). Biology of the Invertebrates. 3<sup>rd</sup> edition. WmC Brown Publishers. pp. 554.