



Undergraduate Program

Course Title Biology 2

Mahidol University International College

Course Code ICBI 103

Science Division

ICBI 103_SYLLABUS_T2 2018-19

1. Course code and course title

Thai ชีววิทยา ๒

English Biology II

2. Number of credits 4 (4-0-8) (Lecture/Lab/Self-study)

3. Program and type of subject

3.1 Program Undergraduate Degree (International Program)

3.2 Type of Subject General Requirement

4. Course Coordinator and Course Lecturer

4.1 Course Coordinator Edward Grand, Ph.D. (edward.gra@mahidol.edu)

4.2 Course Lecturers Edward Grand, Ph.D. (edward.gra@mahidol.edu)

Laird Allan, M.S.

Wayne Phillips, Ph.D.

5. Trimester/ Year of Study

5.1 Trimester

6. Pre-requisite ICBI 101 Biology

7. Co-requisites N/A

8. Venue of Study Mahidol University International College



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Course Goals

Students should be able to explain and describe the diversity of animals and plants to the order or family level, respectively. They should be able to explain, describe and summarize the general structure and function of animals and plants at the system level. They should be able to explain, describe and summarize the general structure and function of ecosystems.

Course Description

(Thai) วิชาพัฒนาการความหลากหลายในเวศวิทยาและโครงสร้างของพืชเชื้อราและสัตว์

(English) Diversity of life; plant forms and functions; animal forms and functions; ecology and behavior

Teaching plan

Week	Topic	Number of Hours		Teaching Activities/Media	Lecturer
		Lecture Hours	Lab/Field Trip/Internship Hours		
1	Introduction, Plant Structure and Growth	4	-	Lecture, media and discussion	Edward Grand (EG)
	Transport in Vascular Plants	4	-	Lecture, media and discussion	EG
2	Plant Nutrition	4	-	Lecture, media and discussion	EG
	Reproduction in Flowering Plants	4	-	Lecture, media and discussion	EG
3	Plant Signals and Behavior	4	-	Lecture, media and discussion	EG
	The Ecological Connection	4	-	Lecture, media and discussion	Wayne Phillips (WP)
4	Behavioural Ecology	4	-	Lecture, media and discussion	WP
	Origin of animal structure and function: Choanoflagellata, Porifera, Cnidaria	2	-	Lecture, media and discussion	Laird Allan (LA)
5	Invertebrates 1 (Xenacoelomorpha; primitive Nephrozoa)	2	-	Lecture, media and discussion	LA
	Invertebrates 2 (modern protostomes: Lophotrochozoa, Ecdysozoa)	2	-	Lecture, media and discussion	LA
6	Modern Deuterostomes (Echinoderms, Chordata)	2	-	Lecture, media and discussion	LA
7	Midterm Review and Assessment (R&A) period	2 + 2		EXAM	EG + LA



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8	Homeostasis and Chemical Signals in Animals	2	-	Lecture, media and discussion	LA
9	Animal Digestive and Excretory Systems	2	-	Lecture, media and discussion	LA
10	Animal Circulatory, Respiratory and Immune Systems	2	-	Lecture, media and discussion	LA
11	Animal Reproduction and Development	2	-	Lecture, media and discussion	LA
12	Nervous and Skeletomuscular System; Senses	2	-	Lecture, media and discussion	LA
FINAL					

2. Plan for Assessing Course Learning Outcomes

2.1 Assessing and Evaluating Learning Achievement

- A. Formative assessment
 - a. Class participation
 - b. Homework
- B. Summative Assessment
 - a. Test 1 (midterm)
 - b. Test 2 (final)



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Grading System

100%-90%	A
89%-86%	B+
85%-80%	B
79%-75%	C+
74%-70%	C
69%-65%	D+
64%-60%	D
< 60%	F

Textbooks and/or other documents/materials

Campbell, N, Urry, L, Cain, M, Wasserman, S, Minorsky, P, Reece, J. 2018. Biology: a global approach. Essex (England): Pearson Education Ltd.. 1,491 p.

Recommended textbooks and/or other documents/materials

Peer-reviewed or otherwise validated articles as deemed suitable by instructors to keep content relevant and up-to-date