

*Mahidol University International College*  
ICBI 382: Systematic Biology and Biodiversity (4 (4-0))  
**Trimester 1, Academic Year 2016-2017 (Sep-Dec 2016)**

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*Class Time, Room:* W, F 1600-1750

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<i>Instructors:</i>	Mr. Laird B. Allan (course coordinator, LBA) <b>Overview, Invertebrates (except cnidarians) and Fish</b>	<i>MUIC Office:</i> Room 3501/8
	Dr. Edward Grand (EAG) <b>Plants and Fungi</b>	<i>MUIC Office:</i> Room 3501/13
	Assistant Prof. Dr. Ramesh Boonratana (RMB) <b>Mammals</b>	<i>MUIC Office:</i> Room 3501/6
	Mr. Rehan al Haq (RAH) (guest lecturer) <b>Reptiles and Birds</b>	Asian Institute of Technology
	Dr. Tumnoon Charaslertrangsi (TNC) <b>Prokaryotes</b>	<i>MUIC Office:</i> Room 3501/2
	Dr. Wayne Phillips (WNC) <b>Algae and Cnidarians</b>	<i>MUIC Office:</i> Room 3501/9

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*Office Hours:* L.A. Drop in times 1400-1600 Tu, We, Fr Appointments recommended at other times.

*Telephone:* 0-2441-5090 x3526 (direct) x3517 (sec.)

*Email:* (for questions and any time a reply is needed) [laird.all@mahidol.ac.th](mailto:laird.all@mahidol.ac.th)

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**Course Description:**

Classification and taxonomy of all living organisms into kingdom, phylum, class, order, family, genus and species; morphology; physiology, evolution, diversity and roles in the ecosystem and environment.

**Academic Resources**

**Required reading:**

Campbell *et al.* *Biology: a global approach, 10e, 11e.* Pearson Education. 2015, 2016.

**Chapters 25 through 34**

**Required reference sites:**

Taxon descriptions and phylogenies at <http://tolweb.org/tree/phylogeny.html>

Phylogenetic trees at [www.ancestorstale.net](http://www.ancestorstale.net)

**Recommended reading:**

Dawkins, Richard. *The Ancestor's Tale.* Penguin Books, 2004.

*Available online in print and Kindle versions.*

**Suggested reading:**

Tudge, Colin. *The Variety of Life.* Oxford University Press. 2000.

*Print version only available.*

## Class Schedule

Week	Topic	Instructor
1	<b>Tree of Life Revision, Origin of Life</b>  <b>Assignment:</b> Evolution Simulation Group report, no more than 3-4 students per group.	LBA
2	<b>Prokaryotes</b>	TNC
3	<b>Fungi ; Producers:</b> <b>Micro and Macroalgae</b>	EAG, WNP
4	<b>Non-vascular plants and sporophytes; Vascular Plants 1</b>	EAG
5	<b>Vascular Plants 2</b> <span style="float: right;"><b>TEST 1 (weeks 1-5)</b></span>	EAG, LBA
6	<b>Invertebrates</b> <b>Worms, Poriferans</b>	LBA
7	<b>Echinoderms, Mollusks</b>  <b>Assignment:</b> Value of any order, family, genus or species OR biological community as a resource that improves the human condition. For values defined see Dr. Steve Morton (CSIRO, Aus.) <a href="https://www.youtube.com/watch?v=7tgNamjTRkk">https://www.youtube.com/watch?v=7tgNamjTRkk</a> Narrated slide show / poster / video, submitted online. Max 3 per group.	LBA
8	<b>Cnidarians; Arthropods 1</b>	WNP, LBA
9	<b>Arthropods 2</b> <span style="float: right;"><b>TEST 2 (weeks 6-9)</b></span>	LBA
10	<b>Vertebrates</b> <b>Fish, Amphibians</b>	LBA
11	<b>Reptiles, Birds</b>	RH
12	<b>Mammals</b>  <b>Assignment:</b> Niche partitioning between similar species (potential competitors) in a single community>. Narrated slide show/ poster / video. Max three per group.	RMB
13	<b>TEST 3 (cumulative 15% and weeks 10-12 85% (during finals week, as scheduled)</b>	LBA

## Grading

- **Three tests (85%)** will assess your knowledge of the names, features and broadly accepted relationships between presented domain to family taxons that represent the major branches of the tree of life.
- **Three group assignments will constitute 15%** of the grade.
- Attending less than 80% of class meetings (< 19 out of 24) will prohibit you from taking the final test.

### *Attendance Policy* (80% attendance required to avoid automatic F)

Three (3) lates count as one absence. You are late if you arrive after any of the following:

- your name is called
- a sign-in sheet is passed
- attendance has been visually checked.

### *Numerical Grading Scheme*

Tests (25+25+35)	85 %
Assignments	15 %

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## *MUIC Letter Grade Scale and Interpretation*

A	≥89.5% Excellent. 4 Grade Points For <b>outstanding</b> work. Difficult to attain and not given easily.
B and B+	80-84.4, 85-89.4% Good, Very good. 3-3.5 Grade Points For work that is very <b>well-done</b> , but not truly outstanding.
C and C+	70-74.4, 75-79.4% Average, Above Average. 2-2.5 Grade Points For work that is at the <b>minimally acceptable passing level</b> for top universities.
D and D+	60-64.4, 65-69.4% Poor. 1-1.5 Grade Points For work that <b>does not meet university standard</b> , but which shows some merit. Credit for course is earned, but student risks probation if GPA falls below 2.00
F	< 59.5% <b>Failing</b> . 0 Grade Points For work that is <b>not at university level</b> .
W	Withdraw (by student choice) Student left the course without finishing. Does not affect GPA but shows on transcript. Often based on failing midterm performance. Must be instructor-approved.
I	Incomplete (by committee decision) Given under extreme circumstances as per Student Handbook. Work must be made up within one term or I becomes F. <b>Never given as a 'second chance'.</b>

\* "Mr. Allan, what does **outstanding** mean?"

a) standing out from a group b) marked by eminence and distinction.

Merriam-Webster Online Dictionary (2015)

<http://www.merriam-webster.com> accessed August 2016.

*If you feel you are truly outstanding, and are not receiving A's, let's talk about it!*

Extra Assignments or Extra Credit: These types of work are sometimes given as options to the entire class. However, under no conditions will individual students be given extra assignments or extra credit to try to improve their grade. This is unfair to everyone else.

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