Course Syllabus

1. Program of Study	Bachelor of Science Program Bachelor of Arts Program Bachelor of Business Administration Program Bachelor of Nursing Science Program
Faculty/Institute/College	Mahidol University International College
2. Course Code	ICNS 111
Course Title	Fundamental Biology
3. Number of Credits	4(4-0-8)(Lecture/Lab/Self study)
4. Prerequisites *(s)*	None
5. Type of Course	General Education Course
6. Session	3rd trimester/every academic year
7. Condition	**-**

8. Course Description

An introduction to the principles and methods of biology that directly impact humans and society; the diversity and development of life, origin of life, ecology and evolution.

9. Course Objective *(s)*

Same as course description

10. Course Outline

Week	Topic	Hour			Instructor
		Lecture	Lab	Self-Study	
1	Introduction: Relevance of Biology, Properties of life, chemical basis of life: Atoms, Molecules and bonds, properties of water	4	0	8	Laird Allan
2	Molecules of life I: Carbohydrates and proteins, origin of life: chemical evolution	4	0	8	Laird Allan
3	Molecules of life II: Nucleic acids and lipids, from genes to proteins, near life particles: viruses, prions, et al	4	0	8	Laird Allan
4	Cells: Prokaryotes and Eukaryotes, organelles, mitosis	4	0	8	Laird Allan
5	Tissues and organs, microscopy demonstration	4	0	8	Laird Allan
6	Review and midterm exam	4	0	8	Laird Allan
7	Organ systems I: Cardiovascular, respiratory, degestive, excretory, musculoskeletal	4	0	8	Laird Allan
8	Organ systems II: lymphatic, endocrine, reproductive, nervous	4	0	8	Laird Allan
9	Evolution I: History, theory, examples	4	0	8	Laird Allan
10	Evolution II: Human origins and diversity, mendelian genetics, genetic technology	4	0	8	Laird Allan

11	Ecology: Populations, communities and ecosystems, final review	4	0	8	Laird Allan
	Total	4	0	8	
Final Examination					

11.Teaching Method *(s)*

11.1 Lectures
11.2 Video
11.3 Laboratory demonstratoins (dissection, prepared slides, whole specimens)
11.4 Self-study (reading texts and websites)

12.Teaching Media

12.1 Text and teaching materials, Video

13.Measurement and evaluation of student achievement

Student achievement is measured and evaluated by

13.1 the ability to know an introduction to the principles and methods of biology that directly impact humans and society; the diversity and development of life, origin of life, ecology and evolution.

Student's achievement will be graded according to the faculty and university standard using the symbols: A, B+, B, C+,C,D+, D, and F.

Students must have attended at least 80% of the total class hours of this course.

Ratio of mark

1. Quizzes	10%
2. Active Class Participation	10%
3. Mid-term exam	35%
4. Final exam	35%
5. Activities	10%

MUIC standard grading criteria: 90% and above is grade A

Grade	Percent (%)
A	90 or greater
B+	85-89
B	80-84
C+	75-79
C	70-74
D+	65-69
D	60-64
F	0-59

14. Course evaluation

14.1 Students' achievement as indicated in number 13 above.

14.2 Students' satisfaction toward teaching and learning of the course using questionnaires.

15. Reference *(s)*

Neil Campbell and Jane B. Reece, Pearson.Essential Biology Benjamin, Cummings

16. Instructor *(s)*

16.1 Laird Allan

17. Course Coordinator

Laird Allan