Course Syllabus

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

2. Course Code ICBI 341
Course Title Neurobiology

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

4. Prerequisite *(s)* ICBI 112, ICBI 204

5. Type of Course Elective

6. Trimester/ Academic Year
2nd trimester/ every academic year

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

8. Course Description
Developmental neurobiology, neuroanatomy, and neurophysiology; some clinical aspects as a result of neuropathological defects or lesions; practical exercises included.

9. Course Objective *(s)*
1. Students should understand various types of nervous system.
2. Students should describe organization and anatomy of nervous system.
3. Students should explain various sense organs, brain and spinal cord.
4. Students should understand the development of central nervous system.

10. Course Outline

week	Topics/Seminar	Hours			Instructor
		Lecture	Lab	Self-study	
1	Nervous tissue, Membrane and action potential, Neurotransmitter, Synaptic transmission and neuronal Junction	3	2	7	Suwadee
2	General features and developmental aspect of central nervous system	3	2	7	Suwadee
3	Organization of spinal cord, spinal nerves and spinal reflexes	3	2	7	Suwadee
4	Brainstem & cranial nerves	3	2	7	Suwadee
5	Diencephalon (epithalamus thalamus and hypothalamus)	3	2	7	Suwadee
6	Midterm lecture examination	3			Suwadee
7	Cerebrum & its specialized functions	3	2	7	Suwadee
8	Autonomic nervous system, Blood supply of CNS	3	2	7	Suwadee

9	General and special senses	3	2	7	Suwadee
10	Motor system (pyramidal and extra pyramidal system: cortical control, basal ganglia, cerebellum)	3	2	7	Suwadee
11	Reticular formation & electrical activity of brain and summary of nervous system	3	2	7	Suwadee
Final lecture examination					
	Total	33	22	77	

11. Teaching Method *(s)*

1. Lecture
2. Suggested readings
3. Discussion in class
4. 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 explain various types of nervous system.

13.2 The ability to describe organization and anatomy of nervous system.

13.3 The ability to explain various sense organs, brain and spinal cord.

13.4 The ability to describe the development of central nervous system.

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.

Ratio of mark

1. Mid-term examination	42%
2. Final examination	42%
3. Laboratory practices	16%
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)*

Kandel, E.R., Schwartz, J.H., Thomas M. Jessell, T.M. Principles of neural science. USA. McGraw-Hill. 2000.

16. Instructor *(s)*

Dr. Suwadee Chaunchaiyakul

17. Course Coordinator

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