

Course Syllabus
MBNS 651 Neuroendocrinology
Academic year 2021

Course ID and Name: MBNS 651 Neuroendocrinology

Course coordinator: Asst. Prof. Sukonthar Ngampramuan

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Instructors:

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Supporting Staff:

Somsong Phengsukdaeng (somsong.phe@mahidol.edu)

Credits: 2 (2-0-4)

Curriculum: Doctor of Philosophy Program in Neuroscience

Semester offering: First semester

Pre-requisites: No

Expected learning outcomes:

1. Explain the theoretical and experimental studies of the relationships between the nervous system and the endocrine glands (PLo1) I

2. Describe the neural controls of endocrine functions and their behavioral correlates to organs (PLO1) I
3. Discuss the research on neuroendocrinology aspects (PLO5) (PLO6) P, R

Alignment of teaching and assessment methods to course learning outcome:

Course learning outcome	Teaching method	Assessment methods
1.Explain the theoretical and experimental studies of the relationships between the nervous system and the endocrine glands.	(1) Lecture (2) Class discussion	(1) Written examination (2) Reports (3) In-class discussion
2. Describe the neural controls of endocrine functions and their behavioral correlates to organs.	(1) Lecture (2) Class discussion	(1) Written examination (2) Reports (3) In-class discussion
3. Discuss the research on neuroendocrinology aspects	Paper assignment active learning Class discussion	(1) Student presentation (2) Reports (3) In-class discussion

Course description:

Theoretical and experimental studies of the relationships between the nervous system and the endocrine glands; neural controls of endocrine functions; endocrine and hormonal influences on the development and function of the nervous system and their behavioral correlates to organs.

Course schedule: August 2021

Time: 09.00-11.00 and 13.00-15.00

Room Online teaching by zoom meeting

Topic	Date	Time	Topic Name	Lecturer
1.	9 Aug 2021	09.00-11.00	Introduction to Neuroendocrinology	Sukonthar
2.		13.00-15.00	Neuroendocrine regulation of growth hormone	Vorasith
3.	11 Aug 2021	09.00-11.00	Neuroendocrine regulation of thyroid hormone	Vorasith
4.		13.00-15.00	Neuroendocrine regulation of reproductive system Pregnancy, parturition and Menopausal period	Kittikun
5.	13 Aug 2021	09.00-11.00	Neural regulation and functions of prolactin	Nattapon
6.		13.00-15.00	Regulation of the gonadotropic axis: beyond the GnRH neuron	Klosen
7.	16 Aug 2021	09.00-11.00	Neural regulation and functions of posterior pituitary hormones Water intake and volume homeostasis	Kittikun
8.		13.00-15.00	Gut brain axis Regulation of feeding behavior and neural controls feeding behavior and metabolism	Sukonthar
	18 Aug 2021	9.00-16.00	Mid-term Examination (Topic 1-8)	Somsong
9.	20 Aug 2021	09.00-11.00	Neuroendocrine regulation of stress response	Nuanchan
10.		13.00-15.00	Neuroendocrine correlates of aging	Chutikorn
11.	23 Aug 2021	09.00-11.00	Neuroendocrine regulation of learning and memory	Wipawan
12.		13.00-15.00	Neuronal control of melatonin synthesis and functions	Piyarat

Topic	Date	Time	Topic Name	Lecturer
13.	25 Aug2021	09.00-11.00	Neuroendocrine regulation of biological clock and clock-controlled gene	Sujira
14.		13.00-15.00	Neuroendocrine regulation of brain and behaviors	Naiphinich
	27 Aug 2021	09.00-16.00	Final Examination (Topic 9-14)	Somsong
15.	30 Aug 2021	09.00-11.00	Current research on Neuroendocrinology group discussion and student presentation	Jiraporn/ Sukonthar

Assessment Criteria:

Written examination 70 %

Student performance /presentation 20 %

Class Attendance and class participation 10 %

Student's achievement will be graded using symbols: A, B+, B, C+, C, D+, D and F based on the criteria as follows:

Percentage	Grade	Description
85-100	A	Excellent
80-84	B+	Very good
70-79	B	Good
60-69	C+	Fairly good
50-59	C	Fair
45-49	D+	Poor
40-44	D	Very poor
< 40	F	Fall

Date revised: July 21, 2021