

Course Syllabus
MBNS 651 Neuroendocrinology
Academic year 2024

Course ID and Name: MBNS 651 Neuroendocrinology

Course coordinator: Asst. Prof. Sukonthar Ngampramuan

Tel: 02-441-9003-7 ext. 1206

E-mail: sukonthar.nga@mahidol.edu

Instructors:

1. Prof. Emeritus Piyarat Govitrapong, Ph.D. (piyarat@cgi.ac.th)
2. Prof. Banthit Chatsawang, Ph.D. (banthit.cha@mahidol.ac.th)
3. Assoc. Prof. Nuanchan Chutabhakdikul, Ph.D. (nuanchan.chu@mahidol.ac.th)
4. Assoc. Prof. Paul Klosen, PhD, HDR (klosen@inci-cnrs.unistra.fr)
5. Assoc. Prof. Doctor. Vorasith Siripornpanich, M.D., Ph.D. (vorasith.sir@gmail.com)
6. Assoc. Prof. Sujira Mukda, Ph.D. (sujira.muk@mahidol.ac.th)
7. Asst. Prof. Sukonthar Ngampramuan, Ph.D. (sukonthar.nga@mahidol.ac.th)
8. Asst. Prof. Kittikun Viwatpinyo, Ph.D. (kittikun.viw@gmail.com)
9. Asst. Professor Doctor Nattapon Panupinthu, M.D., Ph.D. (nattapon.pan@mahidol.ac.th)
10. Asst. Prof. Jiraporn Panmanee, Ph.D. (jiraporn.pam@mahidol.ac.th)

Supporting Staff:

Somsong Phengsukdaeng

Credits: 2 (2-0-4)

Curriculum Master of Science Program in Neuroscience (elective course)
Doctor of Philosophy Program in Neuroscience (elective course for B.Sc.
Graduates)

Semester offering: First semester

Pre-requisites: None

Expected learning outcomes:

1. Explain the theoretical and experimental studies of the relationships between the nervous system and the endocrine glands (PLo2) P
2. Describe the neural controls of endocrine functions and their behavioral correlates to organs (PLo2) P

3. Discuss and present the research on neuroendocrinology aspects (PLO1, PLo5) I, P

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 and present the research on neuroendocrinology aspects	Paper assignment active learning Class discussion	(1) Student presentation With rubric score (2) In-class discussion

Course Description:

The 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 the organs

Course schedule: 2024

Time: 09.30-11.30/13.00-15.00

Room: Onsite at room A 409 Mahidol, Salaya, or

*online Zoom meeting

MBNS 651 Neuroendocrinology 2024

No	Date	Time	Topic/Details	Lecturer
1.	16 Oct 2024	09.30-11.30	L1: Introduction to Neuroendocrinology	Sukonthar
2.		13.00-15.00	L2: Neuroendocrine regulation of growth hormone	Vorasith
3.	18 Oct 2024	09.30-11.30	L3: Neuroendocrine regulation of thyroid hormone	Vorasith
4.		13.00-15.00	L4: Neural regulation and functions of prolactin	Nattapon*
5.	21 Oct 2024	09.30-11.30	L5: Neuroendocrine regulation of reproductive system (reproductive cycle, pregnancy, parturition, and menopause)	Kittikun**
6.		13.00-15.00	L6: Regulation of the gonadotropic axis: beyond the GnRH neuron	Klosen**
7.	25 Oct 2024	09.30-11.30	L7: Neuroendocrine regulation of stress response	Nuanchan
8.		13.00-15.00	L8: Neural regulation and functions of posterior pituitary hormones	Kittikun**
	28 Oct 2024	09.00-16.00	Midterm Examination	Somsong
9.	30 Oct 2024	09.30-11.30	L9: Neuroendocrine regulation of water balance fluid homeostasis, and food intake	Sukonthar
10.		13.00-15.00	L10: Neuroendocrine correlates of aging	Banthit
11.	1 Nov 2024	09.00-11.00	L11: Neuroendocrine regulation of learning and memory	Jiraporn**
12.		13.00-15.00	L12: Neuronal control of melatonin synthesis and functions	Piyarat**

No	Date	Time	Topic/Details	Lecturer
13.	4 Nov 2024	09.30-11.30	L13: Neuroendocrine regulation of biological clock and clock-controlled gene	Sujira
14.		13.00-15.00	L14: Neuroendocrine regulation of immunity	Banthit
	8 Nov 2024	09.00-16.00	Final examination	Somsong
15.	15 Nov 2024	09.30-11.30	L15. Neuroendocrinology journal presentation	Sukonthar All staff (Hybrid**)

Room: Onsite at room A 409 Mahidol, Salaya, or

* Faculty of Science, Phayathai Campus, **online Zoom meeting

Assessment Criteria:

Student's achievements 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 2024