Course Syllabus

MBNS 651 Neuroendocrinology

Academic year 2026

Course ID and Name: MBNS 651 Neuroendocrinology

Course coordinator: Asst. Prof. Sukonthar Ngampramuan

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Instructors:

1. Prof. Banthit Chatsawang, Ph.D. (banthit.cha@mahidol.ac.th)
2. Assoc. Prof. Paul Klosen, PhD, HDR (klosen@inci-cnrs.unistra.fr)
3. Assoc. Prof.Doctor. Vorasith Siripornpanich, M.D., Ph.D. (vorasith.sir@gmail.com)
4. Assoc. Prof. Sujira Mukda, Ph.D. (sujira.muk@mahidol.ac.th)
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7. Lect.Dr. Siraprapa Boobphahom, Ph.D. (siraprapa.boo@mahidol.ac.th)
8. Lect. Dr. Ekkaphot Khongkla, Ph.D. (ekkaphot.kho@mahidol.ac.th)

Supporting Staff: Miss Siriporn Monkasemsiri

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) I
2. Describe the neural controls of endocrine functions and their behavioral correlates to organs (PLo2) I
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: 2026

Time: 9.00-16.00

Room: On-site at room A 409, Mahidol, Salaya, or

*online Zoom meeting

No	Date	Time	Topic/Details	Lecturer
1.	9 Nov 2026	9.30-11.30	L1: Introduction to Neuroendocrinology The hypothalamus and the neuroendocrine regulation of pituitary function	Sukonthar
		13.00-15.30	L2: Neuroendocrine regulation of thyroid hormone	Vorasith
2	10 Nov 2026	9.30-11.30	L3: Neuroendocrine regulation of reproductive system (reproductive cycle, pregnancy, parturition, and menopause)	Ekkaphot
		13.00-15.30	L4: Neural regulation and functions of prolactin	Ekkaphot
3.	11 Nov 2026	9.30-11.30	L5: Neuroendocrine regulation of biological clock and clock-controlled gene	Sujira
		13.00-15.30	L6: Regulation of the gonadotropic axis: beyond the GnRH neuron	Klosen*
	13 Nov 2026	9.30-11.30	L7: Neural regulation and functions of posterior pituitary hormones	Ekkaphot
		13.00-15.30	L8: Neuroendocrine regulation of growth hormone	Vorasith
5.	16 Nov 2026	9.30-11.30	L9: Neuroendocrine regulation of stress response	Sukonthar
		13.00-15.30	L10: Neuroendocrine regulation of immunity	Banthit
6.	17 Nov 2026	9.30-11.30	L11: Neuroendocrine regulation of learning and memory	Jiraporn
		13.00-15.30	L12: Neuronal control of melatonin synthesis and functions	Sujira

No	Date	Time	Topic/Details	Lecturer
7.	18 Nov 2026	9.30-11.30	L13: Neuroendocrine regulation of food intake and energy homeostasis	Sukonthar
		13.00-15.30	L14: Methods in Neuroendocrinology	Siraprapa
	20 Nov 2026	9.30-16.00	**Final examination**	Sukonthar

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

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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: June 2026