Course Syllabus

SIPS 603

Academic Year 2023

Department of Physiology

Faculty of Medicine Siriraj Hospital, Mahidol University

Course ID and name:	SIPS603: Behavioral Neuroscience
Course coordinator:	Asst. Prof. Sompol Tapechum, MD, PhD
Instructors:	Asst. Prof. Sompol Tapechum, MD, PhD
	Assoc. Prof. Narawut Pakaprot, MD, PhD
	Assoc. Prof. Chantacha Sitticharoon, MD, PhD
	Assoc. Prof. Pornjira Pariwatcharakul, MD, Dip., Thai Brd.
	Asst. Prof. Woraphat Ratta-apha, MD, PhD
Credits:	2 (2-0-4) (lecture – laboratory – self-study)
Curriculum:	Masters of Science Program in Medical Physiology
Course type:	☐ Core ☐ Required ☑ Electives
Semester offering:	2/2023
Prerequisite:	None
Date of Latest Revision:	22/01/2024

Course Description:

Biology of behaviors, Neuroanatomical Basis of Behaviors, Neurophysiological Basis of Behaviors, Principle of Psychopharmacology, Neurotransmitters and Neuromodulators, Development and Evolution of the Brain, Methods of Investigating Physiological Behaviors, Sensory Processing and Perception, Movements and Actions, Hormones, Sex and Behaviors, The Regulation of Internal Body States, Ingestive Behaviors and Eating Disorders, Sleep and Biological Rhythm, Emotional Behaviors and Stress, The Biology of Learning and Memory, Cognition and Language, Biological Basis of Behavioral Disorders

Course-level Learning Outcomes (CLOs)

Upon completion of this course, students are able to:

1. Demonstrate knowledge of nervous system structure and functions related to behavioral neuroscience.

2. Apply knowledge of nervous system structure and functions related to behavioral neuroscience for explanation of normal and abnormal behaviors.
3. Analyze and criticize new knowledge/research findings related to behavioral neuroscience base on basic knowledge.

Constructive Alignment of CLOs and Program's ELOs

CLOs	ELO1	ELO2	ELO3	ELO4
1. Demonstrate knowledge of nervous system structure and functions related to behavioral neuroscience.	P	R	P	R
2. Apply knowledge of nervous system structure and functions related to behavioral neuroscience for explanation of normal and abnormal behaviors.	P	R	P	R
3. Analyze and criticize new knowledge/research findings related to behavioral neuroscience base on basic knowledge.	P	R	P	R

Remarks: Show the level of the course management with the symbols I, R, P, and M.

Program's Expected Learning Outcomes

1. Analyze the different concepts, theories, hypotheses related to medical physiological field of interest.
2. Conduct extensive and independent research in medical physiology that expands the frontiers of knowledge in the field of an area of interest.
3. Criticize the research work with a detailed and leading-edge knowledge of physiology in an area of interest.
4. Disseminate new insights of medical physiology to peers and the scientific community at international level.

Course Schedule and teaching/assessment plan

No.	Topic	Hours			CLOs	Teaching & learning strategy	Assessment (in-class)	Lecturers
		Lecture	Laboratory	Self Study				
1	Biology of Behaviors	2	-	4		Lecture&Discussion	Feedback, response to questions	Assist. Prof. Dr. Sompol Tapechum
2	Neuroanatomical Basis of Behaviors	2	-	4		Lecture&Discussion	Feedback, response to questions	Lect. Dr. Rujapope Sutiwisesak
3	Neurophysiological Basis of Behaviors	2	-	4		Lecture&Discussion	Feedback, response to questions	Lect. Dr. Rujapope Sutiwisesak
4	Development and Evolution of the Brain	2	-	4		Lecture&Discussion	Feedback, response to questions	Lect. Dr. Rujapope Sutiwisesak
5	Methods of Investigating Physiological Behaviors	2	-	4		Lecture&Discussion	Feedback, response to questions	Assoc. Prof. Dr. Narawut Pakaprot
6	Movements and Actions	2	-	4		Lecture&Discussion	Feedback, response to questions	Lect. Dr. Rujapope Sutiwisesak
7	Hormones, Sex and Behaviors	2	-	4		Lecture&Discussion	Feedback, response to questions	Assoc. Prof. Dr. Chantacha Sitticharoon
8	The Regulation of Internal Body States	2	-	4		Lecture&Discussion	Feedback, response to questions	Assist. Prof. Dr. Sompol Tapechum

9	Ingestive Behaviors and Eating Disorders	2	-	4		Lecture&Discussion	Feedback, response to questions	Assoc. Prof. Dr. Chantacha Sitticharoon
10	Sleep and Biological Rhythm	2	-	4		Lecture&Discussion	Feedback, response to questions	Assist. Prof. Dr. Sompol Tapechum
11	Emotional Behaviors and Stress	2	-	4		Lecture&Discussion	Feedback, response to questions	Assoc. Prof. Dr. Narawut Pakaprot
12	Principle of Psychopharmacology, Neurotransmitters and Neuromodulators	2	-	4		Lecture&Discussion	Feedback, response to questions	Assoc.Prof. Pornjira Pariwatcharakul
13	The Biology of Learning and Memory	2	-	4		Lecture&Discussion	Feedback, response to questions	Assoc. Prof. Dr. Narawut Pakaprot
14	Cognition and Language	2	-	4		Lecture&Discussion	Feedback, response to questions	Assist. Prof. Dr. Sompol Tapechum
15	Biological Basis of Behavioral Disorders	2	-	4		Lecture&Discussion	Feedback, response to questions	Asst.Prof. Dr. Woraphat Ratta-Apha
Total hours of the study		**30**	**-**	**60**				

Course Assignments

- Chapter preparation for lecture and discussion

Assessment Criteria

- Rubrics on performance
- Written examination (Opened book)

Appeal Procedure

- An appeal can be made by a student to the course coordinator or the graduate program director.