

**SCBM 303**  
**Aging of Central Nervous System**

**Semester 2/2017**

**Department of Pathobiology**  
**Faculty of Science**  
**Mahidol University**

# Course Syllabus

(Lecture-Lab-Self study)

## **SCBM 303 Aging of Central Nervous System      2(2-0-4)**

### **Course description**

Aging Neurobiology of Central Nervous System is a branch of medical science, which is focused at aging mechanism. The topic will include anatomy, physiology and pathology of neuron system. Advance Aging Neurobiology of Central Nervous System will explain about conditions those destroy or impair neuron systems and current standard medical treatment options and advance medical sciences which can be delay or convert the process. The end of topics will review about update research and technologies in Aging Neurobiology of Central Nervous system.

**Prerequisite:**      SCBM 304 Biological science of aging  
                                 SCBM 215 Medical Neuroscience

**Type of course:** required course

**Session:**            2<sup>nd</sup> semester, 3<sup>rd</sup> year student

**Course**              class size: none

## Course objectives

By the end of this course the students are able to understand the aging mechanism in central nervous system, the etiology, pathogenesis and pathology of aging-associated diseases in central nervous system. Understand current standard medical treatment and update research and technologies in aging neurobiology of central nervous system.

## Course outline

Date	Time	Topic		Instructor
23 Feb	9.00-12.00	Course introduction and general background in aging of the nervous system	L1	WP
28 Feb	1.00-4.00 pm.	Nervous system intrinsic changes associated with aging	L2	NC
2 March	9.00-12.00	Alzheimer's disease	L3	PD
7 March	9.00-12.00	Environmental factors and their effect on the aging nervous system	L4	WJ
9 March	9.00-12.00	Protein homeostasis and aging	L5	PS
15 March	9.00-12.00	<b>Midterm Examination (L1-L5)</b>		
21 March	9.00-12.00	Amyotrophic lateral sclerosis (ALS)	L6	LTJ
	1.00-4.00 pm.	Aging's effects on regeneration and repair	L7	NC
23 March	9.00-12.00	Huntington's disease	L8	NK
28 March	9.00-12.00	Parkinson's disease (PD)	L9	SN
30 March	9.00-12.00	Update research and technologies in aging neurobiology	L10	WP
18 April	9.00-12.00	<b>Final Examination (L6-L10)</b>		
			30 hr	

## Teaching Method

Lectures in class 30 hours

## **Teaching Media**

1. Class handouts, Powerpoint presentation
2. Textbooks

## **Measurement and Evaluation of Students Achievement**

1. Class attendance 10%
2. Assignments/ in class activity/ quiz 40%
3. Written Examination (short answer) 50%
4. Student Examination Grade = A, B+, B, C+, C, D+, D, F

## **References**

1. Catherine A. Wolkow, Sige Zou, and Mark P. Mattson.  
Comparative Biology of Aging. Springer, 2010.
2. Jean M. Lauder. Molecular Aspects of Development and Aging of  
the Nervous System. Springer, 2013.

## **Instructors**

1. LTJ = Laran T. Jensen, Ph.D
2. NC = Nisamanee Charoenchon, Ph.D
3. NK = Niwat Kangwanrangsang, Ph.D
4. PD = Associate Professor Permphan Dharmasaroja, Ph.D
5. PS = Assistant Professor Prasit Suwannalert, Ph.D
6. SN = Somphong Narkpinit, M.D.
7. WJ = Associate Professor Wannee Jiraungkoorskul, Ph.D
8. WP = Witchuda Payuhakrit, Ph.D

## **Course Coordinator:**

Witchuda Payuhakrit, Ph.D

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**Requesting an appeal:**

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