

**SCBM 304**  
**Biological Science of Aging**

**Semester 2/2017**

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

# Course Syllabus

(Lecture-Lab-Self study)

## **SCBM 304 Biological Science of Aging**

**2(2-0-4)**

### **Course description**

Biological Science of Aging is senescence aims to highlight the importance of research on aging and give an overview of current knowledge on the biology and genetics of aging, including anti-aging therapies, models and theories of aging. The most ambitious, even if distant, goal of gerontological research is to make aging optional, to develop a cure for aging, and the social implications of a radical increase in human lifespan due to scientific breakthroughs are also discussed.

**Prerequisite:** SCID 102 Cell and Molecular Biology

**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 basic concepts to theory of Aging and aging process in each major system including common diseases associated aging and therapeutic procedure for aging prevention including nutrition, homeopathy and alternative medicine

## Course Outline

Date	Time	Topic		Instructor
Wed 17 Jan	9.00-12.00 am.	Aging of Nervous system	L1	PD
Wed 17 Jan	1.00-4.00 pm.	Introduction, Theory of Aging (Biology and genetic of Aging)	L2	WP
Fri 19 Jan	1.00-4.00 pm.	Aging of Musculoskeletal system and rehabilitation	L3	SV
Wed 24 Jan	9.00-12.00 am.	Aging of skin system	L4	SN
Fri 26 Jan	9.00-12.00 am.	Aging of endocrine	L5	NK
*Wed 14 Feb	9.00-12.00 am.	Midterm Examination (L1-L5)		
Wed 31 Jan	9.00-12.00 am.	Diet nutrition for aging and the future and Caloric restriction	L6	WJ
Thu 1 Feb	9.00-12.00 am.	Immune system and Aging	L7	PM
Fri 2 Feb	9.00-12.00 am.	Homeopathy and alternative medicine, Longevity, health and functioning	L8	AS
Wed 7 Feb	9.00-12.00 am.	Stem cell therapy and aging	L9	PC
Wed 7 Feb	1.00-4.00 pm.	Aging of circulatory system	L10	TB
Wed 28 Feb	9.00-12.00 am.	Final Examination (L6-L10)		
			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. Participation 20%
2. Written Examination 80%
3. Student Examination Grade = A, B+, B, C+, C, D+, D, F

## **References**

1. Nicolas Peter and Hornsby. Handbook of the Biology of Aging. 8<sup>th</sup> ed. Academic Press, 2015.
2. Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffell DJ, Wolff K. Fitzpatrick's Dermatology in General Medicine, vol.1. 8<sup>th</sup> ed. McGraw Hill, 2012.

## **Instructors**

1. AS = Ariya Sarikaphuti, Pharm, Ph.D
2. NK = Niwat Kangwanrangsan, Ph.D
3. PC = Pornthip Chaichompoo, Ph.D
4. PD = Associate Professor Permphan Dharmasaroja, M.D., Ph.D
5. PM = Assistant Professor Ponpan Matangkasombat, Ph.D
6. SN = Somphong Narkpinit, M.D.
7. SV = Sivaporn Vongpipatana, M.D.
8. TB = Associate Professor Tepmanas Bupha-intr, M.D.
9. WP = Witchuda Payuhakrit, Ph.D
10. WJ = Associate Professor Wannee Jiraungkoorskul, Ph.D

## **Course Coordinator:**

Somphong Narkpinit, M.D.

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**Requesting an appeal:**

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