

TIMETABLE FOR SEMESTER I, 2009/2010

LSM2101 – METABOLISM AND REGULATION

Module Coordinator: Dr Yew Wen Shan

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LECTURES:	TUESDAYS	FRIDAYS
TIME:	1200 – 1400 hrs	1200 – 1400 hrs
VENUE:	LT32	LT32

WK	MONTH	LECTURES / TUTORIALS	
		TUESDAYS	FRIDAYS
0.	Aug	Orientation Week - No classes (Mon 3 Aug to Sat 8 Aug 2009)	
1.	Aug	11 Introduction to metabolism BL Tang	14 Electron transport & oxidative phosphorylation BL Tang
2.		18 a. Carbohydrate digestion and absorption b. Glycolysis BL Tang	21 TCA cycle BL Tang
3.		25 Gluconeogenesis BL Tang	28 Pentose phosphate pathway BL Tang
4.	Sep	01 Glycogen metabolism & regulation BL Tang	04 (a) <i>Tutorial</i> (1200-1300) BL Tang
5.		08 a. Overview of amino acid metabolism b. Ammonia production and detoxification. WS Yew	11 a. The Urea cycle and disorders b. Metabolic fates of carbon skeletons WS Yew
6.		15 a. Metabolism of selected amino acids b. Metabolism of specialized products. WS Yew	18 <i>Tutorial</i> WS Yew
Recess week: Sat 19 Sep – Sun 27 Sep 2009 (1 week)			
7.	Sep/Oct	29 Class test I and post-test tutorial	02 (a) Digestion, absorption and transport of dietary fats (b) <i>De novo</i> biosynthesis of fatty acids MR Wenk
8.	Oct	06 (a) Biosynthesis, storage and mobilization of fats (b) β -Oxidation of fatty acids MR Wenk	09 (a) Ketogenesis (b) Metabolism of eicosanoids MR Wenk
9.		13 (a) Metabolism of cholesterol (b) <i>Tutorial</i> MR Wenk	16 a. Brief review of chemistry of nucleotides b. Purine nucleotide biosynthesis WS Yew

10.		20 a. Pyrimidine nucleotide biosynthesis b. Formation of deoxyribonucleotides WS Yew	23 a. Nucleotide degradation b. <i>Tutorial</i> WS Yew
11.		27 (a) Regulation of metabolic pathways (b) Metabolic profiles and inter-relationships of major organs WS Yew	30 Fuel metabolism I (a) Role of insulin & glucagons (b) Starved-fed cycles (c) Diabetes WS Yew
12.	Nov	03 Class test II and post-test tutorial	06 (a) Fuel metabolism II - Anaerobic & aerobic exercise (b) Physiological implications of aerobic metabolism – reactive oxygen species and antioxidants WS Yew
13.		10 (a) Oxidative damage and diseases (b) <i>Tutorial</i> WS Yew	13 No Class
READING PERIOD : Sat 14 Nov to Fri 20 Nov 2009 (1 week)			
EXAMINATION : Wed 25 Nov 2009, 1 pm			
VACATION : Sun 6 Dec 2009 to Sun 10 Jan 2010 (5 weeks)			

Lecturers:

Dr Yew Wen Shan (Module coordinator) (email: bchyws@nus.edu.sg)

A/P Tang Bor Luen (email: bchtbl@nus.edu.sg)

A/P Markus R Wenk (email: bchmrw@nus.edu.sg)

Recommended textbooks:

1. Voet, D., Voet, J. and Pratt, C.: *Principles of Biochemistry* (3rd edition)

(Note that this is the 2008 edition of Voet, D., Voet, J. and Pratt, C.: *Fundamentals of Biochemistry*)

2. Voet, D. and Voet, J.: *Biochemistry* (3rd edition)

3. Smith, C., Marks, D. and Lieberman, M.: *Basic Medical Biochemistry – A Medical Approach* (2nd edition)