

## TIMETABLE FOR SEMESTER I, 2017/2018

### LSM2211 – Metabolism and Regulation

**Module Coordinator: A/P Yew Wen Shan**

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**LECTURES:** TUESDAY  
**TIME:** 1200 – 1400 hrs  
**VENUE:** LT28

**LECTURES:** FRIDAYS  
**TIME:** 1200 – 1400 hrs  
**VENUE:** LT28

WK	MONTH	LECTURES	
		TUESDAYS	FRIDAYS
1.	Aug	15 Introduction to metabolism T Tan	18 a. Electron transport & oxidative phosphorylation b. Oxidative damage and diseases T Tan
2.		22 a. Carbohydrate digestion and absorption b. Glycolysis T Tan	25 a. TCA cycle b. Gluconeogenesis T Tan
3.	Aug/Sep	29 Pentose phosphate pathway T Tan	<b>1 Public Holiday</b>
4.	Sep	5 Glycogen metabolism & regulation T Tan	8 <i>Tutorial on Carbohydrate Metabolism</i> T Tan
5.		12 a. Digestion, absorption and transport of dietary fats b. <i>De novo</i> biosynthesis of fatty acids M Wenk	15 a. Biosynthesis, storage and mobilization of fats b. $\beta$ -Oxidation of fatty acids M Wenk
6.		19 a. Ketogenesis b. Metabolism of eicosanoids M Wenk	22 a. Metabolism of cholesterol b. <i>Tutorial on Lipid Metabolism</i> M Wenk
<b><i>Recess Week: Sat 23 Sep – Sun 1 Oct 2017 (1 week)</i></b>			
7.	Oct	3 <b>CA1</b>	6 a. Overview of amino acid metabolism b. Ammonia production and detoxification WS Yew
8.		10 a. The Urea cycle and disorders b. Metabolic fates of carbon skeletons WS Yew	13 a. Metabolism of selected amino acids b. Metabolism of specialized products WS Yew

9.		17 Fuel metabolism I: a. Role of insulin & glucagons b. Starved-fed cycles c. Diabetes  T Tan	20 a. Fuel metabolism II –Anaerobic & aerobic exercise b. Physiological implications of aerobic metabolism – reactive oxygen species and antioxidants  T Tan
10.		24 <i>Tutorial on Fuel Metabolism</i>  T Tan	27 a. <i>Tutorial on Amino Acid Metabolism</i> b. Brief review of chemistry of nucleotides  WS Yew
11.	Oct/Nov	31 a. Purine nucleotide biosynthesis b. Pyrimidine nucleotide biosynthesis  WS Yew	3 a. Formation of deoxyribonucleotides b. Nucleotide degradation  WS Yew
12.	Nov	7 <i>Tutorial on Nucleotide Metabolism</i>  WS Yew	10 <i>Review</i>
13.		14 <b>CA2</b>	17 <i>Self Study</i>
<b>READING PERIOD: Sat 18 Nov to Fri 24 Nov 2017 (1 week)</b>			
<b>EXAMINATION: Tuesday, 28 November 2017, 9am</b>			
<b>VACATION: Sun 10 Dec 2017 to Sun 14 Jan 2018 (5 weeks)</b>			

**Lecturers:** A/P Yew Wen Shan (Module coordinator)      Tel: 6516-8624  
 ([bchyws@nus.edu.sg](mailto:bchyws@nus.edu.sg))  
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 3685([bchtant@nus.edu.sg](mailto:bchtant@nus.edu.sg))  
 Prof Markus Wenk      Tel: 6516-3624  
 ([bchmrw@nus.edu.sg](mailto:bchmrw@nus.edu.sg))

**Recommended textbooks:**

1. Voet, D., Voet, J. and Pratt, C.: *Principles of Biochemistry (4<sup>th</sup> edition)*
2. Voet, D. and Voet, J.: *Biochemistry (4<sup>th</sup> edition)*
3. Lieberman, M. And Marks AD. : *Marks' Basic Medical Biochemistry – A Clinical Approach 4<sup>th</sup> edition*)