

Schedule for 2310303

HUMAN BIOCHEMISTRY (2 credits)

First semester (2020)

Time: TUE 10.00 - 12.00

Room: เรียน online

Co-ordinator: Nuchanat

Topic	Hrs.	Date	Instructor
Nutrient classification and their roles in human body Biochemistry and functions of energy molecules: carbohydrates, lipids and proteins Biochemistry and functions of enzymes	4	11, 18 Aug 2020	Tanakarn
Determination and value of food energy Recommended energy requirement in a day Nutrition label Vitamins, minerals and water Classification and function of vitamins Classification, source and function of minerals Electrolytes Role of minerals and electrolytes for exercise Chemistry of water and function of water in body Water equilibrium Water requirement for exercise Acid/base equilibrium in human body	4	25 Aug, 1 Sep 2020	Kittikhun
Bioenergetics and thermodynamics Biological oxidation-reduction reactions Oxidative phosphorylation	2	8-Sep-20	Nuchanat
Anaerobic and Aerobic respiration	4	15, 22 Sep 2020	Nuchanat

Exercise energy systems The transfer of energy from nutrients during exercise Carbohydrate consumption during and after exercise	2	29 Sep 2020	Nuchanat
<b>Mid-term examination: 6 Oct 2020 (8:30-10:30)</b>			
Energy from lipids Lipids in food Digestion and absorption of lipids in human body Lipoprotein Lipid Metabolism Lipids as fuels for exercise	4	20, 27 Oct 2020	Surasak
Nitrogen balance Nitrogen balance value during exercise Energy release from proteins Digestion and absorption of proteins in human body	2	3 Nov 2020	Surasak
Amino acid metabolism Proteins as fuels for exercise Affinity of metabolism Important interconversions between biomolecules Regulation of metabolism and adaptation of body during short and long term exercise	2	10 Nov 2020	Surasak

Physiological function and exercise performance Hormones and their functions Biochemical mechanism of hormones Effect of exercise on hormone secretion Ergogenic aids in current application Gene doping and stem cells for exercise performance	4	17, 24 Nov 2020	Saowarath
Final examination: 1 Dec 2020 (8:30-10:30)			