

Schedule for 2310303			
HUMAN BIOCHEMISTRY (2 credits)			
Second semester (2025)			
Time: FRI 13.00 - 15.00		Co-ordinator: Pawinee	
Room: 208 MHMK			
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	10, 17 Jan 2025	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	24, 31 Jan 2025	Kittikhun (ตามเดิม)
Bioenergetics and thermodynamics Biological oxidation-reduction reactions Oxidative phosphorylation	2	7 Feb 2025	Nuchanat
Anaerobic and Aerobic respiration Catabolic and Anabolic process of carbohydrate	4	14, 21 Feb 2025	Nuchanat
Exercise energy systems The transfer of energy from nutrients during exercise Carbohydrate consumption during and after exercise	2	28 Feb 2025	Nuchanat
Mid-term examination: สอบ 3 - 7 Mar 2025; 7 Mar 2025 13:00 - 15:00 น.			

Energy from lipids Lipids in food Digestion and absorption of lipids in the human body Lipoprotein Lipid Metabolism Lipids as fuels for exercise	4	14, 21 Mar 2025	Pawinee
Nitrogen balance. Nitrogen balance value during exercise. The energy released from proteins. Digestion and absorption of proteins in the human body.	2	28 Mar 2025	Pawinee
Amino acid metabolism Proteins as fuels for exercise Important interconversions between biomolecules Regulation of metabolism and adaptation of body during short and long term exercise	2	4 Apr 2025	Pawinee
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	11, 18 Apr 2025	Saowarath
Final-term examination: สอบ 28 Apr - 14 May 2025; 2 May 2025 13:00 - 15:00 น.			