

Schedule for 2310335			
BASIC PHYSICAL BIOCHEMISTRY (2 credits)			
First semester (2023)			
Time: TUE 11.00-12.00; WED 9.00 - 10.00		Co-ordinator: Thanyada	
Room: TUE 503; WED 521 SCI10			
Topic	Hrs.	Date	Instructor
Thermodynamics of biochemical reactions (heat, work, enthalpy, the first law of thermodynamics, entropy, the second and the third laws of thermodynamics, the Gibbs energy, energy distribution in molecular assemblies, biochemical equilibria)	5	8, 9, 15, 16, 22Aug	Thanyada
Transport phenomena of biomolecules (random walk, Fick's law, protein molecular weights and charge, size & shape of macromolecules, lateral diffusion, ion and small protein transport through a membrane)	5	23, 29, 30Aug, 5, 6Sep	Veerasak
Electronic properties of biomolecules (bioelectrochemistry, electronic properties of biomolecules in aqueous solution)	2	12, 13Sep	Veerasak
Hydrodynamics (sedimentation I)	4	19, 20Sep	Kittikhun
<b>Mid-term examination: สอบ 25 - 29 Sep 2023; วันที่ 28 ก.ย. 2566 เวลา 8:30-10:30 น.</b>			
Hydrodynamics (osmotic pressure, viscosity)	3	10, 11, 17 Oct	Kittikhun
Enzyme kinetics (first-order and second-order rate law, Arrhenius plot, Michaelis-Menten mechanism, thermal motion of molecules, biophysical methods for studying enzyme catalysis)	5	18, 24, 25, 31 Oct, 1 Nov	Alisa
Quantum and molecular mechanics (basis principle for quantum mechanics and molecular mechanics, weak forces interaction, protein folding, surface phenomena)	6	7, 8, 14, 15, 21, 22 Nov	Thanyada
<b>Final-term examination: สอบ 27 Nov- 12 Dec 2023; วันที่ 28 พ.ย. 2566 เวลา 8:30-10:30 น.</b>			