

Schedule for 2310335

BASIC PHYSICAL BIOCHEMISTRY (2 credits)

First semester (2022)

Time: TUE 11.00-12.00; WED 9.00 - 10.00

Room: TUE 503; WED 521 SCI10

Co-ordinator: Thanyada

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	9, 10, 16, 17, 23Aug	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	24, 30, 31Aug, 6, 7Sep	Veerasak
Electronic properties of biomolecules (bioelectrochemistry, electronic properties of biomolecules in aqueous solution)	2	13, 14Sep	Veerasak
Hydrodynamics (sedimentation I)	4	20, 21, 27, 28Sep	Kittikhun

Mid-term examination: สอบ 3 - 7 Oct 2022; วันที่ 06-10-2022 เวลา 08:30 - 10:30 น.

Hydrodynamics (osmotic pressure, viscosity)	3	11, 12, 18 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	19, 25, 26 Oct, 1, 2Nov	Alisa
Quantum and molecular mechanics (basis principle for quantum mechanics and molecular mechanics, weak forces interaction, protein folding, surface phenomena)	6	15, 16, 22, 23, 29, 30 Nov	Thanyada

Final examination: สอบ 28 Nov - 13 Dec 2022; วันที่ 29-11-2022 เวลา 08:30 - 10:30 น.
