

**CELL & MOLECULAR BIOLOGY (SCID500) Credit 3(3-0-6)****COURSE SCHEDULE****June 24-Aug 2, 2024****Faculty of Science, Mahidol University**

<b>DATE</b>	<b>TIME</b>		<b>TOPIC</b>	<b>Room</b>	<b>LECTURER</b>
Mon Jun 24	09.00-11.00		Introduction to the Course	L02	Puey
			How to Explore the Cell/Group Activities	L02	Puey
<u>Unit I : Life and Information Flow in Cell</u>					
Tue Jun 25	09.00-10.00	L1	Water and Life	L02	Jirundon
	10.00-12.00	L2,3	Biomolecules of Cells	L02	Jirundon
Wed Jun 26			Self-study		
Thu Jun 27	09.00-11.00	L4,5	Molecular recognition, protein engineering, and structure-based drug design	L02	Jirundon
Fri Jun 28	09.00-11.00	L6,7	Chemical Nature of Genetic Materials	L02	Laran
			DNA Replication	L02	Laran
Mon Jul 1	09.00-11.00	L8,9	Gene Regulation & Gene Expression	L02	Laran
Tue Jul 2	09.00-11.00	L10,11	Gene Technology & Current Research	L02	Laran
	11.00-12.00	SL	DNA Sequencing and Nanopore Technology	L02	Thidathip (SI)
Wed Jul 3			Self-study		
<b>Thu Jul 4</b>	<b>09.00-12.00</b>		<b>EXAM Unit I (L1-11)</b>	<b>Room MDL3</b>	
<u>Unit II : Energy Flow in Biosystem</u>					
Fri Jul 5	09.00-11.00	L12,13	The Catalysts of Life	L03	Ruchanok
	11.00-12.00	L14	Bioenergetics	L03	Ruchanok
Mon Jul 8	09.00-10.00	L15	Chemical Metabolisms	L02	Sittinan
	10.00-11.00	L16	Chemotrophic & Phototrophic Energy Metabolisms	L02	Sittinan
Thu Jul 9	09.00-11.00	SL	Special Lecture (Transcriptomics & Medical Application)	L02	Varodom (SI)
<u>Unit III : Cell Structure and Function</u>					
Wed Jul 10	09.00-11.00	L17,18	Membrane: Structure and Transport Function	L02	Tai/ Jonggonnee
Thu Jul 11	09.00-11.00	L19,20	ER, Golgi and lysosomes	L02	Puey
Fri Jul 12	09.00-11.00	L21,22	Cytoskeleton	L02	Puey
Mon Jul 15	09.00-11.00	L23,24	Mitochondria, chloroplast and peroxisomes	L02	Amornrat
	11.00-12.00	L25	Nucleus	L02	Amornrat
Tue Jul 16	09.00-11.00	SL	Bridging the Gap between Cellular Organization & Molecular Function	L02	Tai/ Puey
<u>Unit IV : Cell Signaling</u>					
Wed Jul 17	09.00-11.00	SL	Cell Signaling & Drug Discovery	L02	Chatchai (RA)
Thu Jul 18			Self-study		
<b>Fri Jul 19</b>	<b>09.00-12.00</b>		<b>EXAM Unit II-III (L12-24)</b>	<b>Room MDL3</b>	

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Mon Jul 22			Self-study (ชดเชยวันเข้าพรรษา)		
Tue Jul 23	09.00-11.00	L25,26	Electrical Signaling in Excitable Cells	L02	Tai/ Jonggonnee
Wed Jul 24	09.00-12.00	L27,28,29	Cell Surface Receptors Intracellular Signal Transduction Techniques and Application in studying Cell Signaling	L02	Arthit
Thu Jul 25	09.00-11.00	L30,31	Cell Adhesion and Extracellular Substances	L02	Krai
<u>Unit V : Cell Division, Cellular Differentiation, Cell Death and Development</u>					
Fri Jul 26	09.00-11.00	L32,33	Cell Division	L02	Rutaiwan
	11.00-12.00	L34	Cell Cycle & Cell Death	L02	Rutaiwan
Mon Jul 29			Self-study (ชดเชยวันพระชนมพรรษา ๖.10)		
Tue Jul 30	09.00-11.00	L35,36	Cell Development	L02	Somyoth
	11.00-12.00	L37	Cell Differentiation	L02	Somyoth
Wed Jul 31	09.00-11.00	SL	Stem cells in regenerative medicine	L02	Punn (SI)
Thu Aug 1			Self-study		
<b>Fri Aug 2</b>	<b>09.00-12.00</b>		<b>EXAM Unit IV-V (L25-37)</b>	<b>Room MDL3</b>	