SCBE 207 Cell and Molecular Biology [3 credit, 3-0-6]

Academic Year 2025, Second semester

Friday 9.00 – 12.00 (SC1-161)

Week	Date	Topics	Instructor
1	9 Jan	○ Welcome to cell biology ○ Small molecules and macromolecules of the cells	Theeraporn
2	16 Jan	○ Introduction to the cell ○ How cells are studied ○ Cell visualization techniques	Theeraporn

3	23 Jan	○ How cells are studied
		  ○ Fractionation of cells and analysis of their molecules
		  ○ Isolating cells and growing them in culture
			Theeraporn

4	30 Jan	○ The composition of cells & Nucleus **Quiz 1**	Theeraporn
5	6 Feb	○ Protein sorting and transport (Endoplasmic reticulum, Golgi apparatus, and Lysosomes)	Theeraporn
6	13 Feb	○ Membrane & Transport	Theeraporn
7	20 Feb	○ Cytoskeletons	Theeraporn
8	27 Feb	○ Cells in their social context **Quiz 2**	Theeraporn
9	**Midterm Exam (2-6 Mar)**		
10	13 Mar	○ Bioenergetics and Metabolism: (Mitochondria, Chloroplasts, and Peroxisomes)	Theeraporn
11	20 Mar	○ DNA mutation and DNA repair	Theeraporn
12	27 Mar	○ Cell Signaling **Quiz 3**	Theeraporn
13	3 Apr	○ Cell cycle, cell division ○ Germ cells and fertilization	Theeraporn
14	10 Apr	○ Cell differentiation and specialization	Theeraporn
15	17 Apr	○ Apoptosis ○ Cancer	Theeraporn
16	24 Apr	○ Review **Quiz 4**	Theeraporn
17	**Final Exam (27 Apr - 8 May)**		

Instructor and Course coordinator

Associate Professor Dr.Theeraporn Puntheeranurak

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Evaluation

Exam	60% (paper exam)
Summative score	30% (e.g. quiz, assignment, presentation)
Attention + activities	10%

Students will be evaluated from their total score (out of 100%). Evaluation and achievement will be justified according to Faculty and University code of conduct grading system of A, B+, B, C+, C, D+, D and F. To pass this course, students must earn a grade of at least D.

Tentative grading system

Total percentage of evaluation	**0-49**	**50-54**	**55-59**	**60-64**	**65-69**	**70-74**	**75-79**	**80-100**
Grade	**F**	**D**	**D+**	**C**	**C+**	**B**	**B+**	**A**

References

Alberts B, Johnson A, Lewis J, Raff M, Roberts K, and Walter P. Molecular Biology of Cell, 4th Ed. Garland Science, NY, USA. 2002.

Cooper GM. The Cell: A Molecular Approach. 4th ed. AMS Press, Sinauer Associates, Inc, 2006.