

SCBM 373 Bioinformatics

Bachelor of Science Program in Biomedical Science
Department of Pathobiology, Faculty of Science, Mahidol University
2 credits (2-0-4)

Course coordinator: Pakorn Aiewsakun (pakorn.aie@mahidol.ac.th)

Lecture hall: Onsite

Scores: Midterm exam: 50%; final exam: 50%

Course schedule

Date	Time	Lecture	Instructors	Room
Molecular sequence analyses				
16/01/2026	09:00-10:00	Introduction to the course	PA	L-02
	10:00-12:00	Sequencing technologies and applications	PA	L-02
23/01/2026	09:00-12:00	Genomics: database search and molecular sequence analysis	PA	L-02
30/01/2026	09:00-12:00	BLAST search	PA	MUSES, computer room, 4 th floor
06/02/2026	Break			
13/02/2026	09:00-12:00	Transcriptomics: gene expression analysis	WS	L-02
20/02/2026	09:00-12:00	Proteomics: structural bioinformatics	SK	L-02
27/02/2026	Break			
06/03/2026	09:00-12:00	Midterm exam	PA	MDL-2
Applications of bioinformatics in biomedical sciences				
13/03/2026	09:00-12:00	Bacterial classification & identification	PP	L-02
20/03/2026	09:00-12:00	Pathogen discovery & clinical diagnosis & environmental metagenomics	AT	L-02
27/03/2026	09:00-12:00	Phylogenetics & phylodynamics & genomic epidemiology	PA	L-02
03/04/2026	Break			
10/04/2026	09:00-12:00	Single-cell and spatial omics in human health and disease	WS	L-02
17/04/2026	Break			
24/04/2026	09:00-12:00	Protein structure prediction and applications in antibody design	JY	MUSES, computer room, 4 th floor
01/05/2026	Break (National labour day)			
08/05/2026	09:00-12:00	Final exam	PA	MDL-2

Instructors:

AT: Assoc. Prof. Arunee Thitithanyanont

JY: Prof. Dr. Jirundon Yuvaniyama

PA: Assoc. Prof. Dr. Pakorn Aiewsakun

PP: Prof. Prasit Palittapongarnpim

SK: Asst.prof. Dr. Sakonwan Kuhaudomlarp

WS: Dr. Waradon Sungnak

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