

SCBE 212 Biochemistry Laboratory for Environmental Biologists

Course time: Saturday 9:30 am - 12:30 pm (AM) and 1:30 pm - 4:30 pm (PM) Hybrid/N-500 (Phayathai)

Sunday 9:30 am - 12:30 pm (AM) and 1:30 pm - 4:30 pm (PM) Hybrid/N-500 (Phayathai)

Date	Topics/Details	Lecturer
Jun 11 (AM)	Introduction, orientation, lab safety (theory)	Pagkapol
Jun 11 (PM)	Lab briefing (cloning part)	Thitinun Phurt + SA
Jun 12 (AM)	Serial dilution, prepare buffers, lab safety (physical)	Thitinun Phurt+ SA
Jun 12 (PM)	Miniprep for plasmid vector	Thitinun Phurt+ SA
Jun 25 (AM)	PCR for insert, UV absorption for plasmid and digested vector concentration measurement	Thitinun Alisa+ SA
Jun 25 (PM)	Gel electrophoresis for PCR product and digested vector	Thitinun Alisa+ SA
Jun 26 (AM)	DNA ligation and bacterial transformation	Thitinun Alisa+ SA
Jun 26 (PM)	Colony analysis and streak plate for bacterial culture	Surang Tavan + SA+WC
July 2 (AM)	Induce bacteria for protein expression and cell lysis	Surang Tavan+ SA+WC
July 2 (PM)	Protein quantification	Surang Tavan+ SA+WC
July 3 (AM)	Gel casting	Surang Tavan+ SA+WC
July 3 (PM)	Protein sample preparation and SDS-PAGE	Surang Tavan+ SA+WC
July 16 (AM)	Protein Techniques Discussion	Surang Tavan+ SA+WC
July 16 (PM)	Laboratory summary & discussion (I)	Surang Phurt

Date	Topics/Details	Lecturer
		Pagkapol
July 17 (AM)	Laboratory summary & discussion (II)	Alisa Phurt Pagkapol

Course Coordinators

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Lecturers

Dr. Pagkapol Pongsawakul	pagkapol.pon@mahidol.edu
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Teaching Assistant

SA : Somwit Archakunalorn
 WC : Wannarat Chanked

Texts

- 1) Green, M.R. and Sambrook, J. 2012. Molecular Cloning: A Laboratory Manual. 4th ed. Cold Spring Harbor Laboratory Press. New York.

2) Class handouts

Assessment

Attendances	15%
Laboratory Preparation	25%
Laboratory/safety skills	10%
Assignment	10%
Laboratory reports (2)	40%