


Schedule for 2310555
 GENE ENGINEER LAB (2 credits)
 Second semester (2020)

Time: FR 09.00 - 12.00, 13.00 - 16.00

Room: LAB 504; LECT 503

เขียน online

Co-ordinator: Tanakarn

Online platform	1	Microsoft team ID: a4r0m15		
	2	Blackboard ID: 2310555 year 2020		
	3	LINE group: QR code		
Topic	Hrs	Date		
I. DAN extraction and PCR				
1.1 Orientation	6	22-Jan-20	Tanakarn	
1.2 Lect. Chr. DNA and plasmid DNA extractions		วันนี้เริ่มเขียน 13.00-16.00		
1.3 Lect. PCR		ตอนเช้าไม่มีเรียน		
1.4 Plasmid and chromosomal DNA extraction	6	29-Jan-20	Tanakarn	
1.5 Agarose gel and UV spectrophotometry				
1.6. PCR and agarose gel electrophoresis of PCR product	6	Feb. 5	Tanakarn	
1.7 Discussion				
II. DNA cloning				
2.1 Brief restriction enzyme digestion and ligation	1	Feb. 12	Pawinee	
2.2 Restriction enzyme digestion	2			
2.3 Ligation	3			
2.4 Brief transformation	2	Feb. 19	Pawinee	
2.5 Transformation	2			
2.6 Brief clone identification	1	Mar. 5	Pawinee	
2.7 Plasmid extraction	2			
2.8 Restriction analysis and colony PCR	2			
2.9 Agarose gel electrophoresis	1			
2.10 Discussion	1			
Mid-term examination:				
III. Site-directed mutagenesis				
3.1 Brief site-directed mutagenesis	1	Mar. 19	Kittikun	
3.2 Site-directed mutagenesis and error-prone PCR	5			
3.3 Transformation of site-directed mutagenesis	1	Mar. 26	Kittikun	
3.4 Gel electrophoresis, gel extraction, ligation, and transformation of error-prone PCR reaction	5			
3.5 Analysis of mutagenesis results	6	Apr. 2	Kittikun	
3.6 Discussion	3	Apr 9 (09.00-12.00)	Kittikun	
IV. RNA extraction and RT-PCR				
4.1 Brief RNA extraction	1	Apr 9 (13.00-16.00)	Tanakarn	
4.2 Preparation of chemicals & glassware, induction of expression and cell collection	2			
4.3 RNA extraction	3	Apr. 16	Tanakarn	
4.4 Quantitative and qualitative determination of RNA	3			
4.4 Brief Dnase treatment and RT-PCR	1	Apr. 23	Anchalee	
4.5 DNase treatment of total RNA	3			
4.6 Reverse transcription	2	Apr. 30	Anchalee	
4.7 PCR	3			
4.8 Agarose gel electrophoresis	3	May. 7 (9.00-12.00)	Anchalee, Tanakarn	
4.9 Discussion	3			
Final examination:				