

Schedule for 2300362 (BBTech)				
BIOLOGICAL SEQUENCE ANALYSIS (3 credits)				
Second semester (2024)				
Time: FR 11.00-12.00 Room SCI05 301			Co-ordinator: Veerasak	
Time: WE 13.00-16.00 Room MHVH 508/1				
Topic	Lect	Prac	Date	Instructor
1. Methods and algorithms for sequence alignment - Pairwise sequence alignment - Database similarity searching - Multiple sequence alignment	6	6	8-Jan (Prac), 10-Jan (Lect), 15-Jan (Prac), 17-Jan (Lect), 22-Jan (Prac), 24-Jan (Lect)	Teerapong
1. Methods and algorithms for sequence alignment - Profiles and Hidden Markov Models	2	2	29-Jan (Prac), 31-Jan (Lect)	Veerasak
2. Gene finding and protein sequence analysis - Gene prediction methods - Promoter prediction and analysis - Predictive methods using protein sequences - Protein structure prediction and analysis	6	6	5-Feb (Prac), 7-Feb (Lect), 19-Feb (Prac), 21-Feb (Lect), 26-Feb (Prac), 28-Feb (Lect)	Veerasak
Mid-term examination: สอบ 3 - 7 Mar 2025; TDF				
3. Processing of data obtained from DNA sequencers - Assembly of raw data into a contiguous sequence - Finding open reading frames and translating into amino acid sequences	6	6	12-Mar (Prac), 14-Mar (Lect), 19-Mar (Prac), 21-Mar (Lect), 26-Mar (Prac), 28-Mar (Lect)	Supaart
4. Sequence analysis tools used in recombinant DNA technology - Restriction mapping - Primer design - DNA cloning - Mutagenesis	6	6	2-Apr (Prac), 4-Apr (Lect), 9-Apr (Prac), 11-Apr (Lect), 23-Apr (Prac), 25-Apr (Lect)	Pattana
Final-term examination: สอบ 28 Apr - 14 May 2025; TDF				