

Class Schedule of Problem Solving in Bioinformatics

Time: TuTh 9:30 am – 10:45 pm from 8/22 to 12/7; **Location:** Engineering Building West 240

Date	Topic	Instructor	Assignment
8/23, Tuesday	Introduction (lecture)	Jianlin Cheng	Review a genome paper (due 8/30)
8/25, Thursday	Genome sequencing and assembly (lecture)	Dong Xu	Review genome sequencing and assembly papers (due 9/1)
8/30, Tuesday	Protein structure prediction (lecture)	Jianlin Cheng	Review protein structure prediction papers (due 9/6)
9/1, Thursday	Gene prediction (lecture)	Dong Xu	Review gene prediction papers (due 9/8)
9/6, Tuesday	Protein function prediction (lecture)	Jianlin Cheng	Review protein function prediction papers (due 9/13)
9/8, Thursday	Protein interaction prediction (lecture)	Dmitry Korkin	Review protein interaction prediction papers (due 9/15)
9/13, Tuesday	Biological pathways networks (lecture)	Gavin Conant	Review biological pathway and network papers (due 9/20)
9/15, Thursday	Student presentation of reviewed papers (Mid-term exam)	Jianlin Cheng	
9/20, Tuesday	Introduction to a genome assembly and annotation project (lecture: data, rules and expectations)	Jianlin Cheng	
9/22, Thursday	Tasks & Solutions for assembling a bacteria genome (Discussion)	Jianlin Cheng	Prepare a presentation-style report to describe tasks, solutions, and implementation plan (a group leader coordinates the group assignment, due 9/27)
9/27, Tuesday	Presentation and Discussion of solution / implementation	Jianlin Cheng	Revise the plan and start implementation led by a group

	plan for genome assembly and annotation. Presentation is given by a group leader.		leader. (<i>implementation is due 10/6</i>)
9/29, Thursday	Tasks & Solutions for gene prediction (Discussion)	Jianlin Cheng	Prepare a presentation-style report to describe tasks, solutions, and implementation plan (due 10/4)
10/4, Tuesday	Presentation and Discussion of solution / implementation plan for gene prediction.	Jianlin Cheng	Revise the plan and start implementation (due 10/13)
10/6, Thursday	Assess and discuss the results of genome assembly (Presentation and Discussion)	Jianlin Cheng	
10/11, Tuesday	Tasks & Solutions for protein structure prediction (Discussion)	Jianlin Cheng	Prepare a presentation-style report to describe tasks, solutions, and implementation plan (due 10/18)
10/13, Thursday	Assess and discuss the results of gene prediction (Presentation and Discussion)	Jianlin Cheng	
10/18, Tuesday	Presentation and Discussion of solution / implementation plan for protein structure prediction.	Jianlin Cheng	Revise the plan and start implementation (due 10/27)
10/20, Thursday	Tasks & Solutions for protein function prediction (Discussion)	Jianlin Cheng	Prepare a presentation-style report to describe tasks, solutions, and implementation plan (due 10/25)
10/25, Tuesday	Presentation and Discussion of solution / implementation plan for protein function prediction	Jianlin Cheng	Revise the plan and start implementation (due 11/15)
10/27, Thursday	Assess and discuss the results of protein structure	Jianlin Cheng	

	prediction (Presentation and Discussion)		
11/1, Tuesday	Tasks & Solutions for protein interaction prediction (Discussion)	Jianlin Cheng	Prepare a presentation-style report to describe tasks, solutions, and implementation plan (due 11/8)
11/3, Thursday	Tasks & Solutions for biological pathway and networks (Discussion)	Jianlin Cheng	Prepare a presentation-style report to describe tasks, solutions, and implementation plan (due 11/13)
11/8, Tuesday	Presentation and Discussion of solution / implementation plan for protein interaction prediction	Jianlin Cheng	Revise the plan and start implementation (due 11/17)
11/10, Thursday	Presentation and Discussion of solution / implementation plan for biological pathway	Jianlin Cheng	Revise the plan and start implementation (due 11/24)
11/15, Tuesday	Assess and discuss the results of protein function prediction (Presentation and Discussion)	Jianlin Cheng	
11/17, Thursday	Assess and discuss the results of protein interaction prediction (Presentation and Discussion)	Jianlin Cheng	
11/22, Tuesday	Discuss integration of the system and final report (Discussion)	Jianlin Cheng	Prepare a plan to integrate the system and write the final report (due 12/16)
11/24, Thursday	Assess and discuss the results of pathway prediction (Presentation and Discussion)	Jianlin Cheng	
11/29, Tuesday	Assess the integration and overall results (Presentation	Jianlin Cheng	The finalized programs and

	and Discussion)		results are due 12/16
12/1, Thursday	Discussion of final report writing, presentation, product and results	Jianlin Cheng	
12/6, Tuesday	Group presentation and discussion	All instructors	