Schedule: CMSE 491 Bioinformatics and Computational Biology

Project	Week	Date	Topic	Content
Describe your previous research, areas of research interest in bioinformatics / computational-biology, type of project that best fits your interests. Post this description in a profile that lets your classmates know you and find potential partners. **Project profile due Mon, Jan 29.**	Week 1	Mon, Jan 08	Introduction & Overview	Course overview
	Week 1	Wed, Jan 10		Getting started
	Week 2	Mon, Jan 15	No class	
	Week 2	Wed, Jan 17	Genome assembly and annotation	Lecture
	Week 3	Mon, Jan 22		Paper discussion
	Week 3	Wed, Jan 24	Sequence alignment and pattern finding	Lecture
Discuss with Arjun (and any other PI), read recent papers, talk to potential partners. Describe project ideas and form groups. **Project topic/team due Wed, Feb 07.**	Week 4	Mon, Jan 29		Paper discussion
	Week 4	Wed, Jan 31	Comparative genomics	Lecture
	Week 5	Mon, Feb 05		Paper discussion
Prepare a two-page pre-proposal (Page1: text; Page2: figures & references). **Project pre-proposal due Wed, Feb 14.**	Week 5	Wed, Feb 07	Genetic variation and quantitative genetics	Lecture
	Week 6	Mon, Feb 12		Paper discussion
Write 5-page proposal describing project goals, division of work, milestones, datasets, and challenges. **Project proposal due Mon, Feb 26.**	Week 6	Wed, Feb 14	Regulatory genomics	Lecture
	Week 7	Mon, Feb 19		Paper discussion
	Week 7	Wed, Feb 21	Functional genomics	Lecture
Review and discuss proposals (NIH review format). **Reviews due Mon, Mar 05.**	Week 8	Mon, Feb 26		Paper discussion
	Week 8	Wed, Feb 28	Mini-Primers	
Address peer evaluations, revise aims, scope, list of final goals & deliverables. **Response due Mon, Mar 14 (note: due after presentation, not Mar 12).**	Week 9	Mon, Mar 05	No class	
	Week 9	Wed, Mar 07		
	Week 10	Mon, Mar 12	Mid-term project proposal presentations	
Continue making substantial progress on proposed milestones. Write outline/first-draft of final report. Meet Arjun to discuss all results and get feedback on the draft. **Mid-course project report due Wed, Apr 04.**	Week 10	Wed, Mar 14	Molecular and digital evolution	Lecture
	Week 11	Mon, Mar 19		Paper discussion
	Week 11	Wed, Mar 21	Molecular docking and dynamics	Lecture
	Week 12	Mon, Mar 26		Paper discussion
	Week 12	Wed, Mar 28	Protein structure prediction	Lecture
	Week 13	Mon, Apr 02		Paper discussion
Complete milestones, finalize results, figures, write-up in conference publication format. As part of the report, comment on your overall project experience. **Final project report due Wed, Apr 25.**	Week 13	Wed, Apr 04	Modeling cellular pathways	Lecture
	Week 14	Mon, Apr 09		Paper discussion
	Week 14	Wed, Apr 11	Metabolomics	Lecture
	Week 15	Mon, Apr 16		Paper discussion
	Week 15	Wed, Apr 18	Large-scale biological networks	Lecture
	Week 16	Mon, Apr 23		Paper discussion
Final presentations	Week 16	Wed, Apr 25	Final project presentations 1	
	Week 17	Mon, Apr 30	Final project presentations 2	