Schedule: CMSE 491 Bioinformatics and Computational Biology

Project	Week	Date	Topic	Content	Learning Materials
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	TBD
	Week 1	Wed, Jan 10		Primers	TBD
	Week 2	Mon, Jan 15	No class		TBD
	Week 2	Wed, Jan 17	Genome assembly and annotation	T1-Part1	TBD
	Week 3	Mon, Jan 22		Paper discussion	TBD
	Week 3	Wed, Jan 24	Sequence alignment and pattern finding	T2-Part1	TBD
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	TBD
	Week 4	Wed, Jan 31	Comparative genomics	T3-Part1	TBD
	Week 5	Mon, Feb 05		Paper discussion	TBD
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	T4-Part1	TBD
	Week 6	Mon, Feb 12		Paper discussion	TBD
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	T5-Part1	TBD
	Week 7	Mon, Feb 19		Paper discussion	TBD
	Week 7	Wed, Feb 21	Functional genomics	T6-Part1	TBD
Review and discuss proposals (NIH review format). **Reviews due Mon, Mar 05.**	Week 8	Mon, Feb 26		Paper discussion	TBD
	Week 8	Wed, Feb 28	Mini-Primers		TBD
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		TBD
	Week 9	Wed, Mar 07			TBD
	Week 10	Mon, Mar 12	Mid-term project proposal presentations		TBD
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	T7-Part1	TBD
	Week 11	Mon, Mar 19		Paper discussion	TBD
	Week 11	Wed, Mar 21	Molecular docking and dynamics	T8-Part1	TBD
	Week 12	Mon, Mar 26		Paper discussion	TBD
	Week 12	Wed, Mar 28	Protein structure prediction	T9-Part1	TBD
	Week 13	Mon, Apr 02		Paper discussion	TBD
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	T10-Part1	TBD
	Week 14	Mon, Apr 09		Paper discussion	TBD
	Week 14	Wed, Apr 11	Metabolomics	T11-Part1	TBD
	Week 15	Mon, Apr 16		Paper discussion	TBD
	Week 15	Wed, Apr 18	Large-scale biological networks	T12-Part1	TBD
	Week 16	Mon, Apr 23		Paper discussion	TBD
Final presentations	Week 16	Wed, Apr 25	Final project presentations 1		TBD
	Week 17	Mon, Apr 30	Final project presentations 2		TBD