Topics covered

Jan 21, 23: Intro; data collection and resources (CKendziorski)
Jan 28, 30, Feb.4: QTL mapping (KBroman)
Feb 6,11,13,18: Phylogenies (BLaarget and CAne)
Feb 20,25: Alignment (MCraven and CDewey)
Feb 27, Mar 4, 6: Chip-Seq (SKeles)
Mar 11,13: RNA-seq (CDewey Mar.11, CKendziorski on Mar.13)
Mar 18,20: Spring Break
Mar 25,27: GSEA, FDR (MNewton)
Apr 1,3,8: Classification and clustering (SWang)
Apr 10: Biomarker development (CKendziorski)
Apr 15,17: Network reconstruction (SRoy)
Apr 22,24: Dynamic treatment regimes and personalized medicine (YZhao)
Apr 29, May1: Student presentations
May 6,8: Student presentations
Evaluation

- Quiz on basic biology - January 28 (5%)
- Homework assignments (50%; calculated from top 5).
- Course project paper (outline 5%; draft 5%; final 15%)
- Course project presentation (20%)
Course projects

- Individual or groups (2-3) to be decided by January 28 (interests/background collected at end of class today).

- Project outlines due week of February 10

- Project drafts due week of March 17 – March 27.

- Outlines must include: clear statement of problem(s) being addressed, deliverables, specification of who is primarily responsible for what (if you are working in a group).

- Drafts must include: clear statement of problem(s) being addressed, why doing so is interesting/important, background specifying what has been done in this area and why what you’re doing is necessary and likely to be better than what is currently available, sketch on details of approach.

- Final papers must include what’s in the draft along with details of the approach, results from simulations and/or case-study data, and a discussion of results.

- Final presentation: 20 minutes (10 minute oral presentation; 10 minute oral exam).