**Class Schedule**

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|  | Date | Unit | Readings- required text\* | Topic |
| 1 | March 30 |  |  | What are genomes and how are they sequenced? |
|  | April 1 |  |  | Bacterial genomes vs Eukaryotic genomes |
| 2 | April 6 |  |  | Insect genomes: progress and challenges |
|  | April 8 |  |  | Functional annotation- protein families |
| 3 | April 13 |  |  | Comparative genomics- finding orthologs |
|  | April 15 |  |  | Evolution of genomes- phylogenomics |
| 4 | April 20 |  |  | Identifying signatures of selection in loci |
|  | April 22 |  |  | *Exam 1* |
| 5 | April 27 |  |  | Insect genomic Identification, Genetic variation-SNPs |
|  | April 29 |  |  | Gene expression- transcriptomics |
| 6 | May 4 |  |  | Comparing transcriptomes between species |
|  | May 6 |  |  | Pathway analyses |
| 7 | May 11 |  |  | Comparing transcriptomes on a systems level |
|  | May 13 |  |  | Gene expression- proteomics |
| 8 | May 18 |  |  | *Exam 2* |
|  | May 20 |  |  | Insect Epigenetics |
| 9 | May 25 |  |  | Silencing genomes- why such variation in knockdown efficacy between insects? |
|  | May 27 |  |  | Ethics of gene editing technology in insects |
| 10 | June 1 |  |  | *Exam 3* |
|  | June 3 |  |  | Presentations |

\*readings will be available in ilearn, no text purchase required