Final Exam Information

- The final exam will be on Wednesday, 9 May 2018, from **2:00–3:50pm**.

- The exam will be cumulative for the semester.

- The exam is closed book, however you may prepare *two sides of a piece of paper* with whatever notes you wish to place on it, and you may use those notes during the exam. When the exam is over, turn in this sheet with the rest of your exam.

- The exam is entirely pen-and-paper based. You may not use the computers nor any other calculating devices.

- We envision ten questions, as follows:

  - Question on heredity and genetic fingerprinting, akin to Problem 1 from the first exam.

  - Question on finding Open Reading Frames, on both primary and reverse complementary strands, akin to combination of Problems 2 and 4 from the first exam. (We will provide codon chart for reference.)

  - Question involving common operations of strings in Python, akin to Problem 5 of the first exam.

  - Question involving writing short pieces of Python code, such as Problem 7 of first exam.

  - Question in which you must build dynamic programming table for LCS problem, and use that table to reconstruct optimal alignment, akin to Problem 2 of second exam.

  - Question in which you are given the dynamic programming table for more general scored alignment, and you must reconstruct an optimal alignment, akin to Problem 3 of second exam.

  - Question in which you are given Python tuple representation of a phylogenetic tree, and you must draw rendering of the tree as would be produced by our tree drawing lab, akin to Problem 4 of second exam.

  - Question in which you must simulate UPGMA algorithm on sample data and draw rendering of the phylogeneitc tree that results, akin to Problem 5 of second exam.

  - Question involving simulation of variant of sorting-by-reversal algorithm (with us giving Python code to simulate)

  - Question involving overlap graphs and/or De Bruijn graphs.