MCB 140 - GENERAL GENETICS (4 UNITS)

(Taken from the UC Berkeley Course Guide (http://guide.berkeley.edu))

COURSE OVERVIEW

SUMMARY

An in depth introduction to genes, their sexual and asexual transmission in individuals and populations, and gene regulation in prokaryotes and eukaryotes. Gene manipulation by recombination, molecular cloning and genome editing is presented in contexts ranging from fundamental mechanisms of chromosome biology to applications in development, aging and disease. Human genetic variation and quantitative evaluation are illuminated. Non-Mendelian and epigenetic modes of inheritance of transposable elements, prions and chromatin states are paired with discussions of groundbreaking technology rewriting the rules of how the genome is analyzed, with attention to the ethical considerations ranging from the history of eugenics to modern controversies.

PREREQUISITES

Biology 1A and 1AL

Spring only

WORKLOAD

TIME COMMITMENT

3 hours of lecture and 1 hour of discussion per weeks.

COLLEGE OF CHEMISTRY PEER SERVICES

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(https://w[illegible].edu/ugrad/curr

lang=en) students/peer-

advising