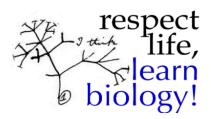
# coreBio II - genetics: Friday 19 Jan. 2018





#### MCDB 1111/2222

coreBIO: foundations + genetics

#### course information

Spring 2018 - Genetics
→SYLLABUS ←
learning goals

Fall 2017 - Foundations

→ SYLLABUS ←
learning goals

virtuallyGenetics virtual biology labs

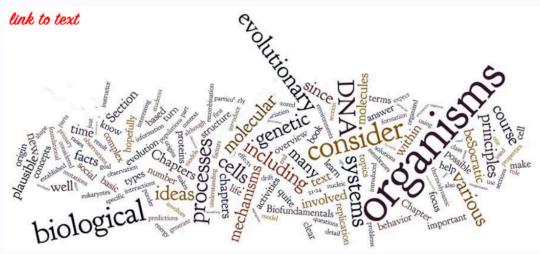
original web version original text @ biowiki



#### Klymkowsky & Cooper

### coreBio I + II: fundamentals + genetics

evolutionary, molecular & systems biology with genomes and genetics





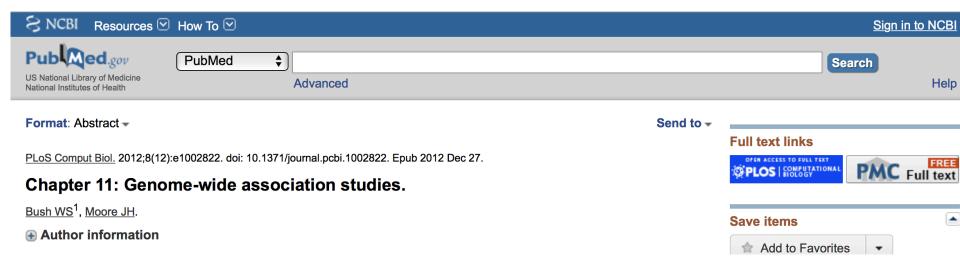
Based on biofundamentals™ and the NSF-supported Chemistry, life, the universe & everything (CLUE) general chemistry course project, coreBio provides an introduction to evolutionary, molecular systems biology & genetics (testimonial).



coreBio courses can be taken instead of MCDB 1150/2150 for MCDB, iPHY, Neuroscience, Biochemistry, and (we believe) EBio majors.

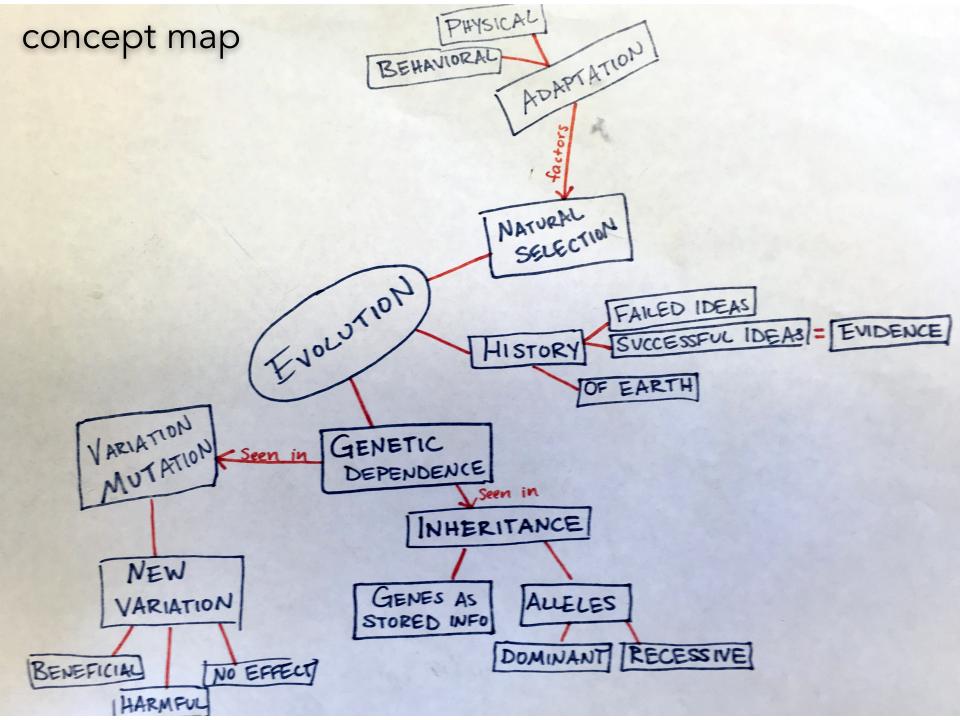
hand in, or write out questions on cards (with name of the back)

### Using pubmed



Using google scholar

## Genetics and Genomics time-line



Darwin + Mendel + Garrod

Evolution: what does it explain, how does it work?

Darwin + Mendel + Garrod

Mendel: what where the key observations? what do they explain? what don't they explain?

#### Garrod:

Genetics and Genomics Timeline





Archibald E. Garrod (1857-1936) postulates that genetic defects cause many inherited diseases

In 1896, Archibald E. Garrod became interested in patients with a rare but rather harmless disorder known as alkaptonuria. When exposed to air, patients' urine turns distinctively dark. Garrod soon concluded that alkaptonuria is a congenital disorder, not the result of a bacterial infection as was commonly thought. Rare in the general population but frequent in children of first-cousin marriages, the incidence of alkaptonuria conformed to the pattern of recessive inheritance described by Gregor Mendel in his experiments with peas.





#### On-line Mendelian inheritance in man

examples: gluten / lactose