## October 7, 2020 MSE 2101 topics

- Cells and metabolism
  - the role of cells revisited
  - the role of enzymes revisited
  - the role of water: mobility, transport, metabolism
- Materials and energy
  - photo/chemo-auto/hetero-trophs

$$ATP \rightarrow ADP \rightarrow ATP \rightarrow ADP \rightarrow ...$$

- DNA (and RNA) the structure
  - backbone (C)
  - bases: adenine (a), guanine (g), cytosine (c) and thymine (t)
- Genes, chromosomes, the noncoding DNA, genomes
- The genetic code
- DNA replication and heredity
- Mutations: the fat cat ate the rat.