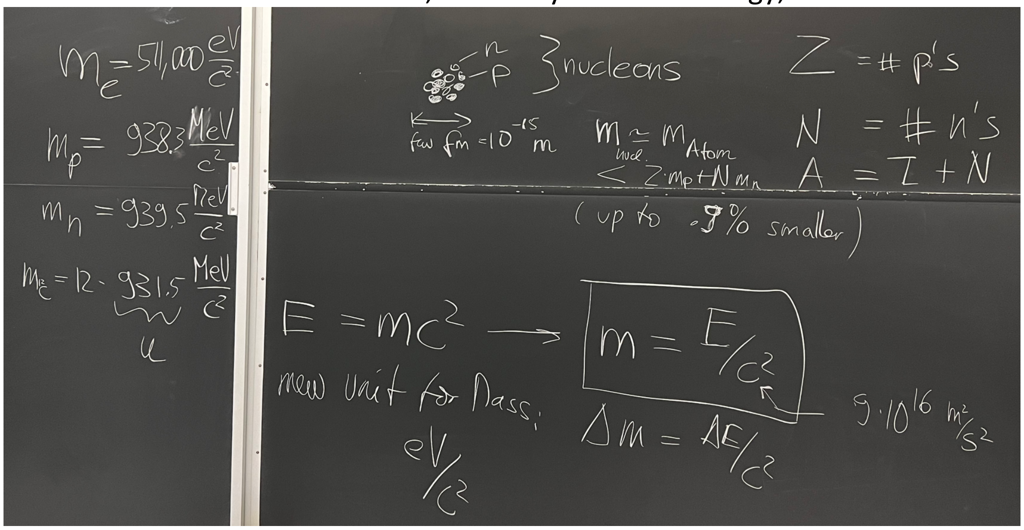
Additional Information on Nuclear Physics – PHYS102N SPRING 2022 – S. KUHN
(Photos taken from in-class white- and blackboard writing)

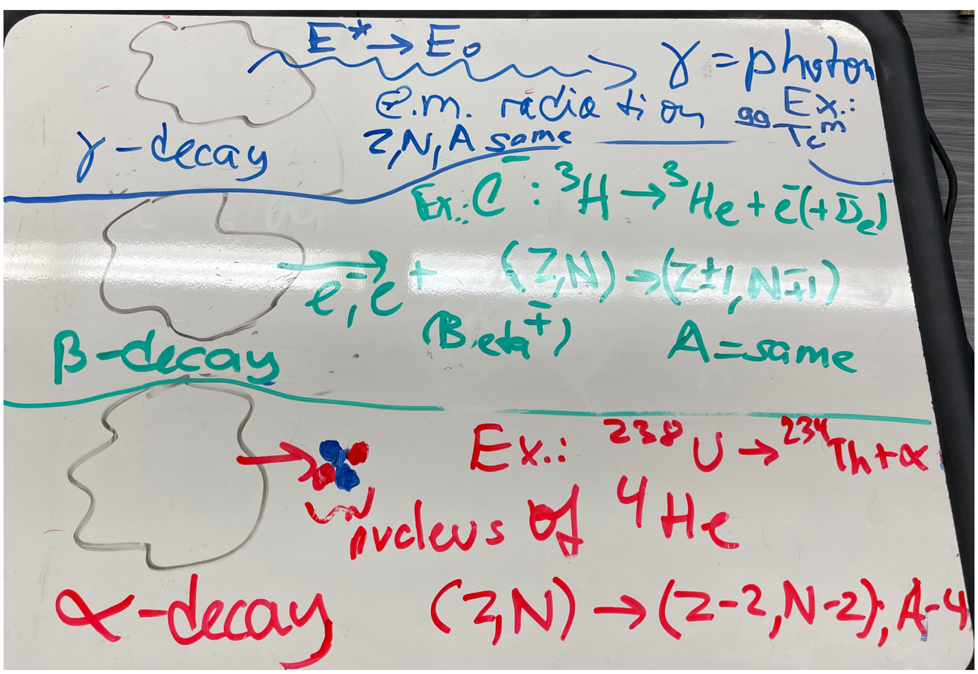
1.) How nuclear masses are defined, how they relate to energy, and units:



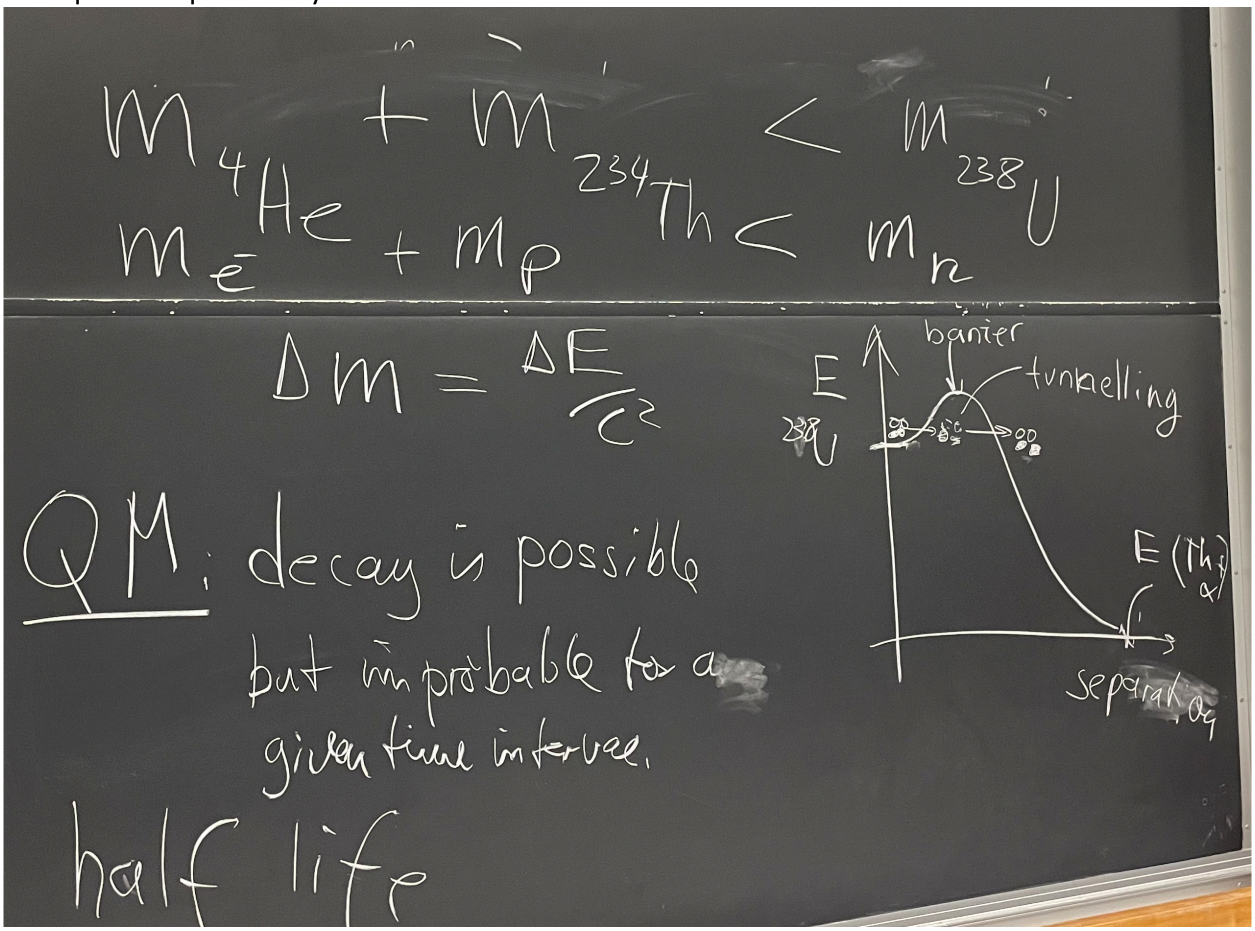
2.) New concepts:

a. Geiger-Müller counter (to measure ionizing radiation, e.g. from alpha/beta/gamma decays
b. Antiparticles: Every charged particle has an antiparticle with exactly the same properties but opposite charge. E.g.: Electrons (charge q = -e) => Anti-electrons = positrons (same mass, same properties, but charge q = +e)

3.) Different types of nuclear decay, with examples:



4.) Example for alpha-decay of uranium-238



5.) Half life, activity and radiometric dating – example carbon-14