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## 1 4/4/2024 lecture

To pass this class, you need to attempt every homwork (if there is homework), go to the midterm and the final, and have at least 60% attendance.

Most of the exam content is based on lectures. There will be practice exams.

Fun fact: professor Rich was a PhD advisor to Neil Tyson.

Saturn's moon Enceladus has plumes of salt water, and under the surface, it contains phosphorus, which is essential to life.

A planet is defined as a moderately large object which orbits a star and shine only by relfecting light from that star. A moon is any object which orbits a planet.

An astronomical unit is the average distance from Earth to the sun, but was redefined in 2012 to be  $1.5 \times 10^{11}$  m, or roughly 93 million miles. A light-year is 63000 astronomical units. A parsec (which is a portmanteau of "parallax" and "arccsecond") is 206000 AU, or 3.26 light-years.