

EENG S111: The Science of Science Fiction

Mark Reed

TTh 4.00-5.15

The genre of science fiction has allowed us to explore new technological and scientific frontiers, and their societal implications. This course is designed to quantitatively explore the scientific basis (and inaccuracies) of modern science fiction. Technologies explored include space travel, robotics and artificial life, nanotechnology, cyber technology, and environmental sustainability/terraforming.

The course will have readings from both fiction and non-fiction sources, including (but not limited to) excerpts from *Flatland*, by Edwin Abbott; *Forever War*, by Joe Haldeman; *Mr. Thompkins*, by George Gamow; *Dragon's Egg*, by Robert Forward; *Ringworld*, by Larry Niven; *The Physics of Star Trek*, by Lawrence Krauss; *Foundation*, by Isaac Asimov; *Do Androids Dream of Electric Sheep?*, by Philip Dirck; *Neuromancer*, by William Gibson; and *The Diamond Age*, by Neal Stephenson, and some contemporary movie clips.

As this is a Science credit class (Sc), there will be weekly quantitative homework assignments. The course will contain a significant number of “guesstimation” problems and examples.

The grade for the class will be based on the homework assignments (40%), a short story outline (10%), a midterm (25%), and a final (25%).