

APh150/Bi270c: Human Impacts by the Numbers

term Spring 2020, units breakdown (2-0-4), Prerequisites: none.

The greatest experiment of the last 10,000 years is the presence and action of modern human beings on planet Earth. At this point, the consequences of this experiment are being felt on many fronts. One way to organize our thinking about what these impacts might be, with tongue in cheek, is to focus on Empedocles's classic elements, earth, air, water and fire, with the idea being to explore how humans have altered the land and its inhabitants, the atmosphere, the oceans and how our quest for cheaper energy (fire) from the world around us has altered that world. Quantitative science depends upon having the facts straight. The aim of this course is develop a rigorous analysis of a broad array of human impacts, at both the level of the central data and in terms of models to interpret that data, with special emphasis on order-of-magnitude estimates and the construction of dimensionless numbers that measure human impacts.

Teaching staff: Rob Phillips, grading basis P/F.