PHYSICS 162: THE PHYSICS OF SOLAR AND RENEWABLE ENERGY

SPRING 2021



COURSE DESCRIPTION

Modern civilization uses vast amounts of energy in forms that are unsustainable and environmentally damaging. What are our alternatives? How do alternative energy sources work, and how much of our needs can they satisfy?

In Physics 162, we'll investigate the science behind alternative energy sources, including solar, hydroelectric, and wind power. We'll learn the principles behind these technologies, and develop an understanding of how much energy we might be able to harness from each of these sources.

The course is designed for **non-science majors**. There are no science-course prerequisites, and we'll develop the ability to make deep insights with simple math. The audience of the course is intentionally very broad; all of us will be the decision-makers of the future – businesspeople, writers, policy makers, or at least voters – who will be faced with complex choices having to do with energy and society. In addition to exploring important areas of contemporary science, a key goal of the course will be to better understand the *process* of science, i.e. how we know what we know, a perspective especially useful for discussions energy policy.

PROFESSOR RAGHUVEER PARTHASARATHY EMAIL: raghu@uoregon.edu