

Science Syllabus

May 5, 2014

1. Mechanics

Dimensions, Scalars and Vectors, Newton's Laws of Motion, Free Body Diagrams

2. Statistical Inference

Probability and statistics, Python and its applications

3. Electricity

Basics of electricity through experiments.

4. Grammar of life - a complex adaptive system

Brief introduction to periodic table with focus on the elements of life, introduction to formation of amino acids, genetic codes and related basic genetics, biomolecules, central dogma-the control, cell division, cell differentiation, cell lineage, morphogenesis with pictures of fetus development, basic functions of several tissues and their general principles of actions, intelligence in system level, life as complex system

5. History of Science

How do scientific discoveries happen?