

COURSE CONTENT

Duration: 30 hours

I. Fundamentals of Astronomy: (5 hours)

Distance, Magnitudes, Brightness & Colour, Our Galaxy, Stars and Planetary Bodies, Stellar Classifications, Hertzsprung-Russell Diagram, Birth of Stars, Pulsating Stars, Morphology of Planetary Bodies, Measurements in Planetary Morphology

II. Electricity-Sources, production and distribution: (10 hours)

Two modes of using Python Interpreter, Variables & Data Types; Operators and their Precedence, Iteration, loop Statements, Arrays & Matrices, Data Visualization, Plotting Mathematical Functions, Calculation of various morphological features of planetary bodies using python, Tracking the ISS using Python.

III. Practical: (10 Hours)

1. Use python modules for visualizing astronomical data
2. Tracking ISS using python modules & libraries
3. Morphological analysis in NASA orbiter using python

IV. Dissertation Project: (5 Hours) Your dissertation project will ideally be related to International Space Station Tracking