Course overview

General concepts:

- Basics (types, fns, if else loops)
- Maths with python (vectorisation)
- Reading/Writing text files
- Plots
- OOP
- Data fitting

Physics/Maths simulations:

- Projectiles with air resistance
- Root finding for polynomials
- Geiger counter
- π with hit or miss MC
- Superposition of waves
- $\vec{E}$ of discrete charge distribution
- Earth-Sun gravitational simulation
- Forced-damped pendulum (meaning of chaos)
- Magnetic field from coil

Computer Science concepts:

Cellular automata (evolution with rules)
Sorting algorithms and complexity analysis
Graph theory