The aim of this course is to teach the students different numerical methods which are essential in many areas of modern life. This course will develop their programming knowledge and analytical ability of the underlying mathematics in popular software packages. From this course, students’ will learn:

- Computing integrals and derivatives
- Solving differential equations
- Building models based on data, be it through interpolation, Least Square, or other methods
- Root finding and numerical optimization
- Estimating the solution to a set of linear and nonlinear equations
- Computational geometry