

School of Chemistry

Module Aims: Session 2022-2023

Module CH4458: Chemistry Distance Learning (Physical Chemistry) (CH4716)

Lecturer: Professor M. Buck and Professor M. Bühl

Convenor: Dr E. R. Kay

Aims: This course offers the material covered by module CH4716 in a distance learning mode to students on the MChem one year placement. Building on the students' basic knowledge of physical chemistry, the module provides a wider perspective of electrochemistry and computational methods.

The part on electrochemistry aims for raising awareness of the significance of this field for science and technology. Equilibrium electrochemistry, the structure of and kinetics at the electrolyte/electrode interface will be covered. Electroanalysis and various types of electrodes will also be discussed.

The computational part will build on the foundations laid in module CH2701 and introduce further aspects of modern computational chemistry related to the electronic structures of atoms and molecules. The goal is to achieve a basic understanding of the underlying approximations made in practical calculations and to appreciate the strengths and weaknesses of the resulting "model chemistries".