

## Integrated Structural Biology summer school 2025

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| Monday 30/06   |                                                                  |
| 8:00-9:00      | Registration                                                     |
| 9:00-10:00     | Introduction to the course                                       |
| 10:00-11:00    | Overview of structural biology techniques                        |
| 11:00-11:30    | Coffee break                                                     |
| 11:00-12:30    | <i>In silico</i> modelling and protein structure prediction      |
| 12:30-14:00    | Lunch                                                            |
| 14:00-18:00    | Practical: protein modelling and visualization                   |
| Tuesday 1/07   |                                                                  |
| 9:00-10:00     | Introduction to Small Angle X-ray Scattering (SAXS)              |
| 10:00-11:00    | Modelling based on SAXS reconstructions                          |
| 11:00-11:30    | Coffee break                                                     |
| 11:00-12:30    | SAXS data analysis                                               |
| 12:30-14:00    | Lunch                                                            |
| 14:00-18:00    | Practical: SAXS modelling                                        |
| Wednesday 2/07 |                                                                  |
| 9:00-10:00     | Introduction to cryo-electron microscopy (cryo-EM)               |
| 10:00-11:00    | cryo-EM sample preparation                                       |
| 11:00-11:30    | Coffee break                                                     |
| 11:00-12:30    | cryo-EM data analysis                                            |
| 12:30-14:00    | Lunch                                                            |
| 14:00-18:00    | Practical: cryo-EM sample preparation and data collection        |
| Thursday 3/07  |                                                                  |
| 9:00-10:00     | Introduction to X-Ray crystallography                            |
| 10:00-11:00    | Crystallization techniques                                       |
| 11:00-11:30    | Coffee break                                                     |
| 11:00-12:30    | X-ray diffraction data analysis                                  |
| 12:30-14:00    | Lunch                                                            |
| 14:00-18:00    | Practical: remote X-ray data collection at Diamond Light Source  |
| Friday 4/07    |                                                                  |
| 9:00-10:00     | Introduction to cryo-electron tomography (cryo-ET)               |
| 10:00-11:00    | Introduction to nuclear magnetic resonance (NMR)                 |
| 11:00-11:30    | Coffee break                                                     |
| 11:00-12:30    | Introduction to Native Mass Spectrometry                         |
| 12:30-14:00    | Lunch                                                            |
| 14:00-18:00    | Practical: cryo-EM and X-ray structure refinement and validation |