

Title	Comprehensive X-ray Crystallography		
Credits	2.5		
Semester	2		
Level	4		
Coordinator	Helge Müller-Bunz		
Indicative Module Descriptor:			
The module aims to give students the opportunity to develop a theoretical, analytical and practical approach to the use of X-ray Crystallography. Students will be aware of the format for reporting data and learn to appreciate the quality of published data.			
Indicative Learning Outcomes			
On successful completion of this module, students should:			
<ul style="list-style-type: none"> • Have a knowledge and understanding of the theoretical principles underpinning X-ray Crystallography; • Be familiar with operational constraints of the technique; • Be aware of a variety of crystallization methodologies; • Be familiar with the use of a polarizing microscope to determine crystals suitable for analysis; • Be able to mount a crystal; • Be able to read and understand data tables; • Be able to analyse and interpret data and be able to discern how reliable finished data tables are; • Be able to present data in a form suitable for publication in a thesis or manuscript; • Be aware of quality of published data in literature. 			
Workload:	50		
Class Contact: Lectures	10		
Class Contact: Tutorials	3		
Class Contact: Laboratories	2		
Specified Assignments	10		
Autonomous Student learning	25		
Assessment	type	%	timing
Assignments	Project	100	End Sem 2
<ol style="list-style-type: none"> 1. Complete the solution of a test crystal with unknown variables (possibly also study examples of poor data in the literature) (3) 2. Solve a relevant crystal structure (4) 3. Present a data set including a table with terms defined and three selected images for Figures to illustrate the best view that reflects the crystal structure (3) 			