



Course Title:	TEM Advanced
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CONTACT INFORMATION	
Course Leader	<i>Prof. Paul Midgley</i>
COURSE DETAILS	
Level	<i>Masters</i>
Pre-requisites	<i>None</i>
Linked courses	<i>None</i>
Credits	<i>10 (for Swansea and Birmingham)</i>
Total student effort	<i>100 h approx</i>
Delivery	<i>Lectures</i>
Assessment method(s)	<i>Project proposal</i>
Resources needed	
Texts	

Course Description: ~150 Words

Briefly describe areas covered indicating depth of coverage

This course is composed as a series of masterclass lectures by specialists in each technique. The techniques will be explained in detail and the potential and limitations discussed. Lecturers are available for further discussion. Assessment is through a research proposal from the student to use one or more of the techniques described relevant to their research work. The individual lecturers are available to assist with this and recommend relevant literature.

Specimen preparation FIB (Dr Jon Barnard)
 Electron Holography (Dr James Loudon)
 Electron Diffraction (Dr Alex Eggeman)
 HREM (Dr Cate Ducati)
 STEM (Dr Jon Barnard)
 Image and spectral analysis (Dr Francisco De la Pena)
 Electron Tomography (Professor Paul Midgley)
 TEM applied to Nanomaterials (Dr Cate Ducati)

Learning Outcomes: Max 50 words

Students studying this course should have a clear knowledge of the scope and potential of each of the techniques described and be able to propose a way that these might be applied to their research.