



Course Title:	RAMAN SPECTROSCOPY
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CONTACT INFORMATION	
Course Leader	<i>Dr. Lata Sahouta</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>Exam</i>
Resources needed	<i>None</i>
Texts	

Course Description: ~150 Words

Briefly describe areas covered indicating depth of coverage

This course aims to introduce the basic principles of Raman scattering of light from solids, and to summarise how the Raman effect is used to study a variety of microstructural aspects of solid and liquid materials. The operation, calibration and safety issues relating to Raman spectrometers will be covered, and some case studies will be presented to learn how to interpret the features of Raman spectra commonly observed in literature. The course covers the classical theory and quantum mechanical theory of phonon modes in crystals, and how they may be probed by Raman spectroscopy to give information about the material's structure. A basic understanding of crystallography, quantum mechanical theory of solids, and wave optics are assumed for this course, and will not be covered in detail.

Learning Outcomes: Max 50 words

Students should understand the basics of the technique and understand how to use it and interpret the results.