University of Pretoria Yearbook 2017

Interferometry 716 (EFR 716)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Prerequisites	No prerequisites.
Contact time	16 contact hours per semester
Language of tuition	Module is presented in English
Academic organisation	Electrical, Electronic and Com
Period of presentation	Semester 1

Module content

Credits: 16 (must be combined with Introduction to the science of measurement to form a 32 credit module) Theory: Michelson interferometer, Mach-Zehnder interferometer, Shack-Hartmann interferometer, Fabry-Perot interferometer, introduction to polarisation interferometry, introduction to interference microscopy, introduction to optical thin films. Practical: alignment of optical flats, evaluation of optical surfaces, interpretation of interferograms obtained from a Fisba interferometer, interpretation of Newton fringes, application of a wedge interferometer to determine the thickness of a thin film.