

# University of Pretoria Yearbook 2019

## Introduction to the science of measurement 716 (EIS 716)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	16.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	16 contact hours per semester
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Electrical, Electronic and Computer Engineering
<b>Period of presentation</b>	Semester 1

### Module content

Credits: 16 (must be combined with another 16 credit Laboratory in photonics module to form a 32 credit module)

Theory: Introduction to metrology, international equivalence of units of measurement, realisation of the SI units, principles of measurement, total quality management, data analysis and calculation of uncertainty of measurement. Practical: calibration of luminance and illuminance meters, calibration of an oscillator for frequency, calibration of a thermocouple and digital readout by comparison with an industrial platinum resistance thermometer, characterisation and composition of thin films, national measurement standards of length/mass/electrical current.

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.