




**4 DAY FIBRE OPTICS  
WORKSHOP TRAINING  
PROGRAMME**



Day	AM	Lunch	PM	Remarks
<b>8:00am</b>	Arrival of participants and guests			
<b>9:00am</b>	Prof. David Mellor's remarks on the training			
<b>9:10am</b>	Rector's remarks and welcoming the Minister to open the workshop			
<b>9:20am</b>	Hon. Minister's remarks to open the workshop			
<b>1</b>	<p><b>Health &amp; Safety Issues</b></p> <p>Raise Awareness of <b>Fibre Optic Safety</b> </p> <p><b>Laser, Chemical, Sharps, Epoxy Resins, Heat Live Fibre Detectors</b></p> <p><b>Fibre Optic Technology</b> Review Fundamentals appropriate to knowledge and skill sets of trainees</p> <p>Light Basics – Reflection – Refraction and Fresnel Reflection, LED, VCSEL, Lasers,</p> <p>Operating Wavelengths WDM DWDM</p> <p>Modal and Chromatic Dispersion, Numerical Aperture, Concentricity CMD PMD</p> <p>The decibel and Reference Units</p>		<p><b>Review Optical Fibres</b></p> <p>Fibre Structure Multimode and Singlemode Bare Fibre Coatings, Core and Cladding dimensions 8-10/125 SM, 62.5/125 , 50/125 MM</p> <p>OS1 OM1 OM 2 OM3</p> <p>G.652 G.653 G.655 ITU Fibre types</p> <p>Bare Fibre Optic Cable</p> <p>Optical Fibres Bending radii Markings and Identification</p> <p>Cable Loading Handling Precautions and Installation Stresses, Bundling, Cable routing, Cable Storage</p> <p>Fibre Optic Installation and Maintenance Procedures</p> <p>Intrinsic and Mechanical Losses</p>	Theoretical / practical training day supported with video and PowerPoint Presentations.
<b>2</b>	<p><b>Practical Training Day</b> Optical Fibre Cable stripping tools and techniques practical</p> <p>Cleaving Bare Fibres using high precision cleavers practical</p>		<p><b>Understanding and using test equipment</b> Optical Time Domain Reflectometry OTDR Testing fault diagnostics</p> <p>Insertion Loss Measurement (ILM) using a light source and power metre</p>	Practical training, instructor demonstrations and trainee practice

	<p>Terminate Cables using pre connectorised pigtails</p> <p>Splicing fibres using fusion splicers practical Trainee practice</p> <p>Fibre Management in to a variety of Breakout Boxes, Closures and Patch Panels Inside Plant ISP</p>		<p>Continuity testing using a visible light source</p> <p>Inspection Microscopes and Video Probes</p> <p>Fibre Optic connector types and serviceability cleaning and inspection criteria</p>	
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<p><b>3</b></p>	<p><b>Practical Training Day</b></p> <p>Fibre Management in to a variety of Breakout Boxes, Closures and Patch Panels Out side Plant (OSP)</p> <p>Fibre Optic Jointing Enclosures</p> <p>Fibre Optic Optical distribution frames ODF</p>		<p><b>Practical Training Day</b></p> <p>Splice fibres and build simulated fibre optic link ISP OSP</p> <p>Internal and external cable types</p> <p>Prepare cable, fit, inspect and test cables, fault finding</p> <p>Bare fibre adaptors</p> <p>Mechanical splices</p>	<p>Practical Exercises</p>
<p><b>4</b></p>	<p><b>Trainee Practical Testing</b></p> <p><b>Quality Inspections</b></p> <p>Acceptance Testing</p> <p>Insertion Loss Measurement (ILM) Light Source and Power Meter</p> <p>Inspection Microscopes and Video Probes</p> <p>Visible Fault locators</p> <p>Documentation and Records</p>		<p><b>Trainee Practical Testing</b></p> <p>Optical Return Loss measurement ORL</p> <p>OTDR Fault diagnostics</p> <p>Maintenance Procedure</p> <p>Fibre Characterisation</p> <p>Trouble shooting</p> <p>Course summary and feed back</p>	<p>Practical Exercises</p> <p>Continual improvement</p>