OBJECTIVES AND COURSE CONTENT OF SHORT TERM COURSES

Operational Plan No.	ICT-42
Name of the Course	Optical Communication Technologies: Wired & Wireless (18 – 22 August 2025) (Inter-Disciplinary)
Objectives of Course	Optical Fiber Communication has acquired a special place in electronic communication industry over past few decades. Since an optical wave can accommodate large amount of information, the system has a great potential to meet the global telecommunication challenges. The course endeavors to provide an opportunity to learn and appreciate the technology options and performance evaluation of system for optimum usages.
Course Content Photonic Elements	The STC contents comprises of topics: Needs and potential of optical transmission, fundamentals of optical fiber wave guiding, Transmission characteristics of optical fibers; Optical sources and detectors, OFC system design and analysis aspects, Optical amplification of OFC signal; WDM and Super High Capacity OFC Systems; Non-linear Effects in OFC and Soliton Transmission; Modeling and Simulation of OFC Systems; Passive Optical Networks (PONs) & FTTH; Optical wireless communication technologies: FSO & Li-fi, and lab measurements and hands-on training using OFC trainers and design softwares.
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