

# Applied Quantum Training Program

Syllabus | November 2022

<i>Date</i>	<i>Time</i>	<i>Course Content</i>
<i>November 5 Saturday</i>	09:00-17:00	Theoretical Session: Basic Optics Theoretical Discussion (Various Topics) + Q&A Practical Sessions: Basic Optical Elements, Handling, Usage
<i>November 6 Sunday</i>	09:00-17:00	Theoretical Session: Lasers, Spectral Filtering Theoretical Discussion (Various Topics) + Q&A Practical Session: Laser Properties, ECDL
<i>November 12 Saturday</i>	09:00-17:00	Theoretical Session: Spontaneous Parametric Down Conversion (SPDC) Theoretical Discussion (Various Topics) + Q&A Practical Session: SPDC- Observation, Phase Matching, Time Correlation
<i>November 13 Sunday</i>	09:00-17:00	Theoretical Session: Single Photon Detectors Theoretical Discussion (Various Topics) + Q&A Practical Session: SPD- Electronics, Terms, Specs
<i>November 19 Saturday</i>	09:00-17:00	Theoretical Session: Entanglement & Realization (violation of Bell's inequality) Theoretical Discussion (Various Topics) + Q&A Practical Session: Entangled Photon Source- Specs & Setup
<i>November 20 Sunday</i>	09:00-17:00	Theoretical Session: Quantum Key Distribution (QKD) Theoretical Discussion (Various Topics) + Q&A Practical Session: QKD Protocols & Setups + Quantum Sensing implementations
<i>November 26 Saturday</i>	09:00-17:00	Theoretical Session: QKD Protocols, Usage, Eligibility Theoretical Discussion (Various Topics) + Q&A Practical Session: Fiber Coupling, Alignment
<i>November 27 Sunday</i>	09:00-17:00	Theoretical Session: QKD Attacks Theoretical Discussion (Various Topics) + Q&A Practical Session: RF Fingerprint Attack, Timing Jitter Attack