Course Schedule

“Fiber Optics and Photonics in a nutshell”

Day & Time	Training Activity
Day 1 (09:00 – 12:00)	Introductory course on waveguides and fibers (lectures)
Day 1 (14:00 – 17:00)	Fiber characterization and preparation (hands-on)
Day 2 (09:00 – 12:00)	Fiber connectorization (hands-on)
Day 2 (14:00 – 17:00)	Fiber splicing (hands-on)
Day 3 (09:00 – 12:00)	Fiber diagnostics (hands-on)
Day 3 (14:00 – 17:00)	Fiber handling and packaging (hands-on) (hands-on)

Course Details (Day 1)

09:00

17:00

Day 1a. **Introductory course on waveguides and fibers** (lectures)

Location: ALPhANOV Conference Room

Details: Lectures on Introduction to waveguides. Transverse modes. Propagation and losses. Gain fibers. Fibered components.

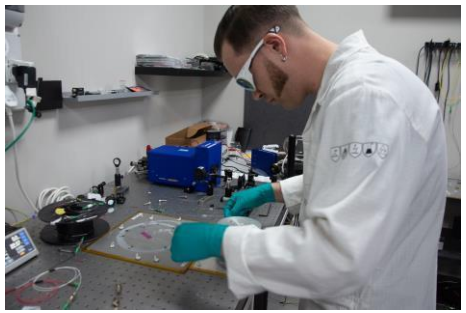
Training Duration: 3 Hours

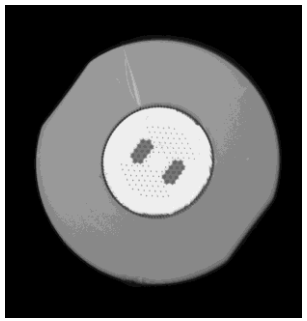
Day 1b. **Fiber characterization and preparation** (hands-on)

Equipment Used: laser diode, powermeter, VYTRAN cleaver, FUJIKURA cleaver

Details: laser safety equipment and implementation, beam handling and alignment, review of laser-based and opto-mechanical components used in beam shaping, beam transportation and beam delivery, review of laser-based machine tool & workstation architecture

Training Duration: 3 Hours





Course Details (Day 2)

09:00

17:00

Day 2a. **Fiber connectorization** (hands-on)

Equipment Used: KRELL polishing device, DOMAILLE polishing device, DATA-PIXEL microscope and interferometer

Details: Connector fabrication. Connectors polishing (FC/PC, FC/APC, SMA, E2000/APC, …). Connector losses measurements. Fiber end facet quality measurement.

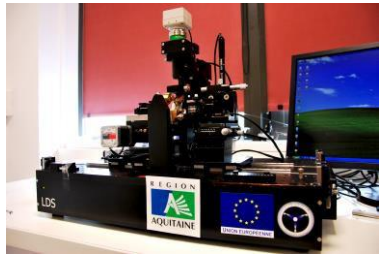
Training Duration: 3 Hours

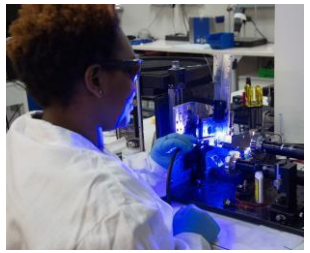
Day 2b. **Fiber splicing** (hands-on)

Equipment Used: VYTRAN cleaver, FUJIKURA cleaver , FUJIKURA splicer, 3SAE splicer, NYFORS recoater

Details: Precision cleaving. Fiber splicing (single mode, multimode, specialty). Recoating.

Duration: 3 Hours





Course Details (Day 3)

09:00

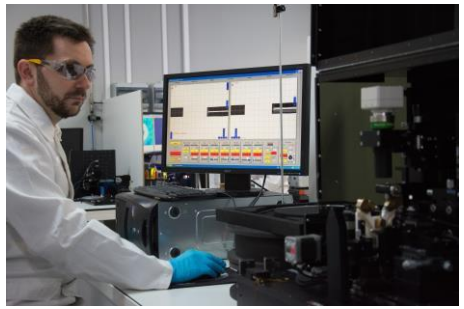
17:00

Day 3a. **Fiber diagnostics** (hands-on)

Equipment Used : WINCAM beam profiler, powermeter

Details: Losses measurements (passive and active), beam characterization

Training Duration: 3 Hours



Day 3b. **Fiber handling and packaging** (hands-on)

Equipment Used: 3D printing

Details: Handling and packaging of fiber components.

Training Duration: 3 Hours