



Courses on

Photonic Integrated Circuits Design, Fabrication & Packaging

The **Integrated Photonic Technologies Center INPHOTEC**, part of the **TeCIP Institute** of the **Scuola Superiore Sant'Anna**, in collaboration with **CNIT** (National Inter-University Consortium for Telecommunications), announces a **comprehensive training program on photonic integrated circuits design and fabrication**, and on **photonic/electronic packaging and characterization**.

INPHOTEC makes available during the courses to the enrolled trainees its **700 sqm highly professional fabrication facility and technology platforms for clean room live sessions**.

Target candidates are coming from the academia and the industry with a master of science in the area of Electronic or Telecommunication Engineering or Physics, or professionals with adequate background who want to pursue intensive specialization courses with practical sessions in the complete line of design, fabrication, packaging and characterization.

The number of admitted trainees is limited to 20 units.

A certificate of attendance will be released to participants.

Courses

- A. Photonic Integrated Circuit Design and Fabrication (PIC D&F)**
[2 weeks]
- B. Photonic and Electronic Integrated Circuit Packaging (PEIC Pack)**
[1 week]

A **Characterization and Testing (C&T) session** [up to 1 week] is offered to trainees after realization of the chip by INPHOTEC.

A. PIC D&F (2 weeks) Pisa

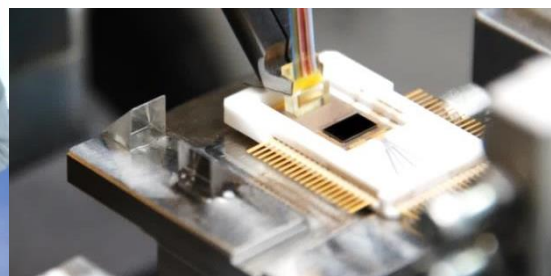
Mask layout development (approx 2 months) Homework

B. PEIC Pack (1 week) Pisa

Chip fabrication and packaging (approx 4 months) by INPHOTEC

C&T session (up to 1 week) Pisa

The two courses A and B can be taken as stand-alone or in combination according to the organization aside



Course A PIC D&F

Day	Morning	Afternoon
Mo	Introduction to PICs; waveguides and passive devices	Software installation; introduction to mode solver and propagator
Tue	Passive devices	Simulation of passive devices
Wed	Active devices (modulators & photodetectors)	Circuit simulation: theory and software description
Thu	Introduction to mask design: design rules and PDK overview	PIC fabrication & technology steps (photolithography, e-beam lithography, etching, depositions, metallizations, planarization)
Fri	PIC packaging techniques and design constraints	Project development presentation and discussion
Mo	Characterization and metrology, reliability (theory + lab tour)	Mask design with a tutor
Tue	INPHOTEC fabrication platforms	Mask design with a tutor
Wed	Mask design with a tutor / Clean Room live session	Clean Room live session / Mask design with a tutor
Thu	Packaging Lab session (beginners)	PIC Characterization Lab session

Course B PEIC Pack

Day	Morning	Afternoon
Mo	Introduction to PEIC Packaging	Overview of players in photonic/electronic packaging
Tue	Technologies: Dicing, Polishing, Die attachment	Technologies: Wire bonding + Lab session 1
Wed	Technologies: Flip chip	Lab session 2
Thu	Technologies: Assembly, Alignment, Pigtailling	Lab session 3
Fri	Photonic/electronic package design and layout	Flow chart and assembly methodology

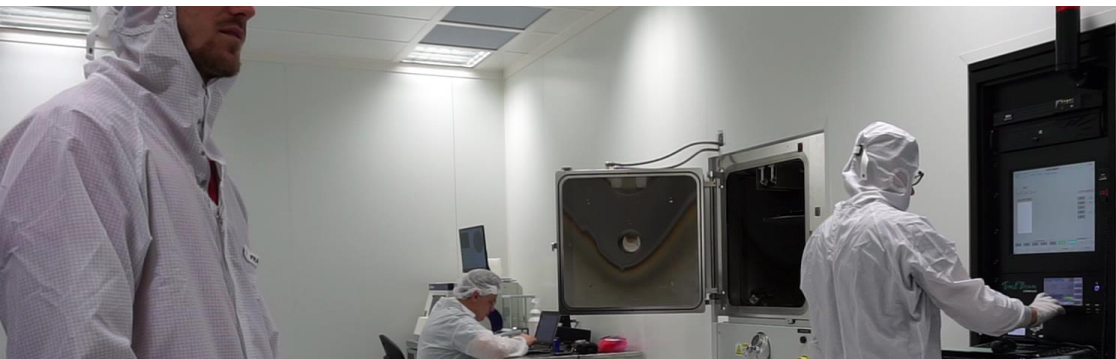
1 st batch	1	• PIC D&F (September 5, 2016)
	1	• PEIC Pack (November 14, 2016)
	1	• C&T (March 20, 2017)
2 nd batch	2	• PIC D&F (March 2017)
	2	• PEIC Pack (May 2017)
	2	• C&T (September 2017)

Schedule

INTRODUCTORY OFFER
1st batch at NO-Charge!

It's FREE!

Registration by May 2, 2016
at www.inphotec.it



CONTACTS

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