



**Courses on
Photonic Integrated Circuits Design, Fabrication & Packaging
2nd Edition, a.y. 2016/2017**

Programmes

**Course “Photonic Integrated Circuit Design and Fabrication (PIC D&F)”
8 - 12 May 2017**

Monday 8, 2017 (9am to 6pm)

Introduction to PICs, waveguides, passive and active devices

Tuesday 9, 2017 (9am to 6pm)

Active devices, Introduction to mask design: design rules and PDK overview
Software installation and Phoenix OptoDesigner

Wednesday 10, 2017 (9am to 6pm)

Phoenix OptoDesigner
Phoenix PDK user

Thursday 11, 2017 (9am to 6pm)

Phoenix PDK user
Inphotec Fabrication platforms & chip characterization

Friday 12, 2017 (9am to 6pm)

Mask design with a tutor / clean room live session
Mask design with a tutor / clean room live session

At the end of the course PIC D & F, students will have set the Mask Design project and will be able to independently develop it over the following two months, taking advantage of the design software-dedicated licenses.

**Course “Photonic and Electronic Integrated Circuit Packaging (PEIC Pack)”
15 - 17 May 2017**

Monday 15, 2016

Introduction to PIC Packaging
Technologies: Wire bonding, die attachment, flip chip, reliability

Tuesday 16, 2016

Lab session - morning
Technologies: Wire bonding + Lab session 1

Wednesday 17, 2016

Lab session - morning
Lab session - afternoon

At the end of the PEIC pack course or within two months of its completion, the designed photonic integrated circuit can be delivered to the InPhoTec infrastructure in order for it to be fabricated. This will take about 4 months.

**Course “Characterization and Testing (C&T) session”
4-7 December 2017**

The C&T Course is organized into laboratory sessions aimed at verifying adequate photonic integrated circuit fabrication results, in order to discover how a device respects the design specifics. This is usually done through testing and electronic measurement sessions on the device, in order to provide an accurate outline of circuit performance.