PHOTONICS TOOLKITS

Get started, create a prototype and learn about photonics technology!

PHABLABS 4.0, a European project where we combine the science of light and light technologies with the world of existing Fab Labs.

What?

A total of 33 Photonics workshops, tailored to three different target groups, are developed to be performed in **Fab Labs.** But can also serve as excellent **STEM-projects** with your students.

Check out all instructions:
http://www.phablabs.eu/photonics-workshops

PHABLABS 4.0

B-PHOTONICS decided to provide complete toolkits for three different workshops. For all other workshops, the photonics materials can be purchased via the website.
http://b-photonics.eu/en/photonics-toolkit

IR glove

Build a DIR-remote-control-glove. By bringing two fingers together, you could command a robot to stop, fo or change directions. You'll learn to implement electronic components and drive them using Arduino. At the same time, you'll learn about infrared technology.
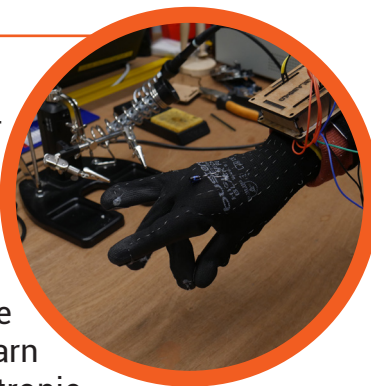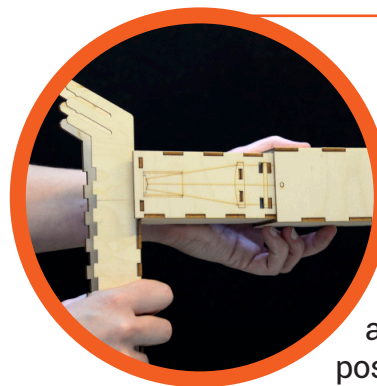
👤 15-18y	🕐 6h	💵 €25/IRglove

GOBO Projector

The photonics Gobo slide projector is composed of various parts shaped from wood with a laser cutter. The power LED and the two lenses make it possible to project a figure or drawing made on a plate.
The distance between the two lenses can be adapted to change the size and focus of the image.

👤 10-16y	🕐 2h	💵 €12,5/projector

RGB lamp

With this photonics toolkit you can make a powerful RGB lamp. The intensity of each colour is controlled by your smartphone. This can be completed in a 2.5-hour workshop, thanks to the included breadboards that significantly reduce the amount of time spent on soldering.
This is a great project that perfectly fits with studying the Internet-of-things!

👤 15-18y	🕐 2,5h	💵 €23/lamp

B-PHOTONICS
INSPIRING THE NEXT GENERATION

These Photonics workshops were developed and thoroughly tested in the PHABLABS 4.0 project and the toolkits will be distributed by B-PHOTONICS.

More information about the project:
www.phablabs.eu

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33 PHOTONICS WORKSHOPS

Learning starts with the "Photonics Workshops". Those creative "Photonics Workshops" will be characterized by an acquisition of the basic photonics principles, while working towards a working system in a short period of time. The workshops are tailored for 3 target groups: Young Minds (10-14y), Students (15-18y) and Young Professionals (+18y).

Make a laser maze, art with polarisation, blinking traffic lights for cyclists, enhance your cuddly toy with light....
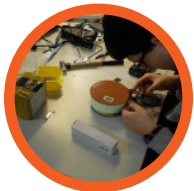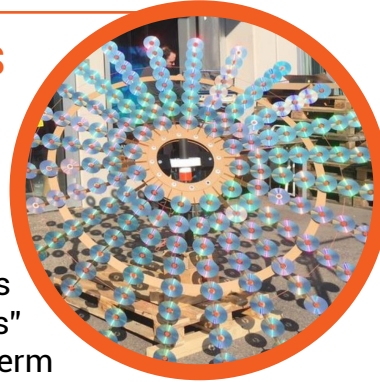
You can do all these Photonics Workshops with all the tools from a Fab Lab.

Check out all instructions:
http://www.phablabs.eu/photonics-workshops

11 PHOTONICS CHALLENGER PROJECTS

The "Photonics Challenger Projects" focus on longer term assignments where a practical challenge must be tackled with photonics tools and components, and where creativity is key. Here the role of the instructor is that of a coach. Participants will be equipped to independently accelerate and deepen their competencies for innovation if they are given easy access to all of the right tools to put their ideas into practice.

Design a smart lamp which react on your voice, bake cookies on your home made solar cooker, let cars communicate via LiFi, make a hologram of shiny objects....

Find out more about the challengers:
http://www.phablabs.eu/photonics-challenger-projects
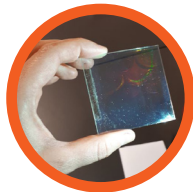
GENDER BOOKLET

We want more girls and young women in science, technology, engineering, manufacturing, construction - from the clasroom to the boardroom and at all stage in between! And we are eager to share this information with you!

The PHABLABS 4.0 consortium has taken up the responsibility to positioning the content of all developed material such that they are appealing to each of the different target groups. Especially for the young minds, a gender-balanced approach is taken through a multitude of actions, e.g. the choice of the workshop content, how the workshops are organised, and instructions for the coaches. Through these actions we bridge specific gender challenges with girls such as the general tendency for a lack of self-confidence in science and technology, stereotypes about gender roles, and the contextual approach.
Discover in this booklet how to handle a gender-balanced approach in your fab lab, classroom, ...
http://www.phablabs.eu/gender-action-team

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PHOTONICS²¹

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