

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

### **SYLLABUS DEL CORSO**

# **Photonic Crystals**

2223-116R-M9

#### **Title**

Photonic Crystals

### Teacher(s)

Prof. Massimo Gurioli (Università di Firenze)

#### Language

English

### **Short description**

- 1. Elements of electromagnetism
- 2. Eigenvalue problem in photonics and analogy with quantum mechanics
- 3. Photonics crystals and photonic bands
- 4. Negative refraction
- 5. Point and line defects (cavities and waveguides)
- 6. Photonics on membranes: high-Q cavities
- 7. Purcell effect and strong coupling in 3D microcavities
- 8. Thresholdless laser

## **CFU / Hours**

1 CFU/8 hours

# **Teaching period**

June 2023

# **Sustainable Development Goals**

QUALITY EDUCATION