## Classroom Training

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Teaching Methodology</th>
<th>Impegno orario (relativo all’attività didattica assistita)</th>
<th>University Credits (CFU)</th>
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</thead>
<tbody>
<tr>
<td>Introduction to the Seasonal School</td>
<td>Frontal lesson</td>
<td>2</td>
<td>0.2</td>
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<tr>
<td>Basic of optical components</td>
<td>Frontal lessons + Laboratory Demo</td>
<td>8</td>
<td>0.8</td>
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<tr>
<td>Optical fiber sensor systems</td>
<td>Frontal lessons + Laboratory Demo</td>
<td>10</td>
<td>1</td>
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<tr>
<td>Imaging sensors for industrial applications</td>
<td>Frontal lessons + Laboratory Demo</td>
<td>8</td>
<td>0.8</td>
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<tr>
<td>Basics of photonic integration</td>
<td>Frontal lessons + Laboratory Demo</td>
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<tr>
<td>Photonic integration for sensing applications</td>
<td>Frontal lessons + Laboratory Demo</td>
<td>4</td>
<td>0.4</td>
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<tr>
<td>1 Industrial Seminar</td>
<td>Frontal Lesson (Rete Ferroviaria Italiana)</td>
<td>2</td>
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- Introduction to the Seasonal School (Fabrizio Di Pasquale, 2 hours)
- Basic of optical components (Claudio Oton, 8 hours)
- Optical fiber sensor systems (Fabrizio Di Pasquale 8 hours, Yonas Muanenda 2 hours)
- Imaging sensors for industrial applications (Carlo Alberto Avizzano, 8 hours)
- Basics of photonic integration (Stefano Faralli, 6 hours)
- Photonic integration for sensing (Claudio Oton 2 hours, Antonella Bogoni 2 hours)

Industrial Seminar (2 hours) “Photonic applications in railway”, Ing. Mirko Ermini - RETE FERROVIARIA ITALIANA

### SCHOOL PROGRAM

**Monday January 23rd**

23 January 09:00-11:00 **INTRODUCTION TO THE SEASONAL SCHOOL "PHOTONIC TECHNOLOGIES FOR SENSING APPLICATIONS"**, F. Di Pasquale

23 January 11:00-13:00 Basic of Optical Components (Optical Fibers), C. Oton

23 January 14:30-16:30 Basic of Imaging Sensors (HW), C.A. Avizzano

23 January 16:30-18:30 Basic of Optical Components (Passive Optical Components), C. Oton

**WELCOME COCKTAIL** (Sede Centrale) 18.30
Tuesday January 24th

24 January 09:00-11:00 Basic of Optical Components (Optical Sources), C. Oton
24 January 11:00-13:00 Basic of Imaging Sensors (SW), C.A. Avizzano
24 January 14:30-16:30 Basic of Optical Components (Detectors), C. Oton
24 January 16:30-18:30 Imaging Sensors for Industrial Applications 1, C.A. Avizzano

Wednesday January 25th

25 January 09:00-11:00 Optical Fiber Sensor Systems (Basic of Optical Fiber Sensors), F. Di Pasquale
25 January 11:00-13:00 Basic of Photonic Integration 1, S. Faralli
25 January 14:30-16:30 Optical Fiber Sensor Systems (Fiber Bragg Grating Sensors), F. Di Pasquale
16:00-16:30: TBD
25 January 16:30-18:30 Imaging Sensors for Industrial Applications 2, C.A. Avizzano

Thursday January 26th

26 January 09:00-11:00 Optical Fiber Sensor Systems (Raman and Brillouin based Distributed Sensing), F. Di Pasquale
26 January 11:00-13:00 Basic of Photonic Integration 2, S. Faralli
26 January 14:30-16:30 Optical Fiber Sensor Systems (Hybrid Distributed Sensors), F. Di Pasquale
16:00-16:30: TBD
26 January 16:30-18:30 Basic of Photonic Integration 3, S. Faralli

Friday January 27th

27 January 09:00-11:00 Optical Fiber Sensor Systems (Distributed Acoustic Sensing), Y. Muanenda
27 January 11:00-13:00 INDUSTRIAL SEMINAR, "Photonic applications in railway", Mirko Ermini (Rete Ferroviaria Italiana)
27 January 14:30-16:30 Photonic Integration for Sensing Applications: LIDAR, A. Bogoni
27 January 16:30-18:30 Photonic Integration for Sensing Applications: FBG READING UNITS ON CHIP & BIO-CHEMICAL SENSING, C. Oton