

# MASTER IN PHOTONICS

<https://photonics.masters.upc.edu/en/academic-year-2023-24>

# MASTER EUROPHOTONICS

<https://www.europhtonics.org/wordpress>

# TIMETABLE ACADEMIC YEAR 2023-2024

Last update: September 18th 2023



# Calendar. Academic Year 2023-2024

September '23						
M	Tu	W	Th	F	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

October '23						
M	Tu	W	Th	F	Sa	Su
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November '23						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

December '23						
M	Tu	W	Th	F	Sa	Su
			1	2	3	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

January '24						
M	Tu	W	Th	F	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February '24						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

March '24						
M	Tu	W	Th	F	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April '24						
M	Tu	W	Th	F	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

May '24						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June '24						
M	Tu	W	Th	F	Sa	Su
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July '24						
M	Tu	W	Th	F	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August '24						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September '24						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Block	Teaching Period
B1A	12 Sept - 06 Oct
B1B	09 Oct - 05 Dec
B2	11 Dec - 16 Feb
B3	19 Feb - 19 Apr
MSc Thes	22 April...

<b>Lab Days</b>
<b>Exams</b>
<b>Activity Days</b>
<b>Without activity</b>

## Important dates and information

### REGISTRATION:

Master in Photonics: September 7<sup>th</sup> 2023

### COURSE STARTS:

Master in Photonics: 12<sup>th</sup> September 2023 / Europhotonics: 09<sup>th</sup> October 2023

**WELCOME SESSION:** 12<sup>th</sup> September 2023 at 11h30, Physics building, University of Barcelona, Martí i Franquès 1, room V11G (see map in the Annex).

### SPRING SCHOOL by Erasmus Mundus Europhotonics Master

Tentative date: **March 26<sup>th</sup>-29<sup>th</sup> 2024**

(Master in Photonics students are also invited)

### TEACHING BLOCKS

Lectures are grouped into three teaching blocks plus a fourth block allocated for the Master Thesis

**Block 1A:** From 12<sup>th</sup> Sep to 06<sup>th</sup> Oct (**only MSc. in Photonics**). **Location:** University of Barcelona, Physics building, Martí i Franquès 1, Barcelona

**Block 1B:** From 09<sup>th</sup> Oct to 05<sup>th</sup> Dec. **Location:** University of Barcelona, Physics building, Martí i Franquès 1, Barcelona

**Block 2:** From 11<sup>th</sup> Dec to 16<sup>th</sup> Feb. **Location:** UPC Campus Nord, Barcelona

**Block 3:** From 19<sup>th</sup> Feb to 19<sup>th</sup> Apr. **Location:** UPC Campus Nord, Barcelona

**Block 4:** From 22<sup>nd</sup> Apr until July or September. **Location:** Master Thesis advisor's institution.

**Christmas holidays:** From 23 Dec 2023 to 08 Jan 2024

**Easter holidays:** From 23 March to 02 April

## Block 1A: Universitat de Barcelona, Facultat de Física

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
10:00-11:00			SEMINARS Room NA		
11:00-12:00					
12:00-13:00					
13:00-14:00					
14:00-15:00		INTRODUCTION TO PHOTONICS Room A23M Code 230550	INTRODUCTION TO PHOTONICS Room A23M Code 230550	INTRODUCTION TO PHOTONICS Room A23M Code 230550	
15:00-16:00					
16:00-17:00		BEAM PROPAGATION AND FOURIER OPTICS Room A23M Code 230553	BEAM PROPAGATION AND FOURIER OPTICS Room A23M Code 230553	BEAM PROPAGATION AND FOURIER OPTICS Room A23M Code 230553	
17:00-18:00					

## Block 1A: Laboratory

	MONDAY 02 OCTOBER				FRIDAY 06 OCTOBER
15:00-19:00	LABORATORY SESSION 1  (UPC / UAB / UB)				LABORATORY SESSION 1  (UPC / UAB / UB)

**Notes:** See maps at the end to navigate UB building

# Block 1B: Universitat de Barcelona, Facultat de Física

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
10:00-11:00			SEMINARS Room NA		
11:00-12:00					
12:00-13:00					
13:00-14:00					
14:00-15:00	PHOTONICS MATERIALS AND METAMATERIALS Room A23M Code 230562	QUANTUM OPTICS Room A23M Code 230555  ACTIVE AND SPECTRAL IMAGING Room A26P Code 230581	INTRODUCTION TO PHOTONICS Room A23M Code 230550	INTRODUCTION TO PHOTONICS Room A23M Code 230550	QUANTUM OPTICS Room A23M Code 230555  ACTIVE AND SPECTRAL IMAGING Room A26P Code 230581
15:00-16:00					
16:00-17:00	FIBERS AND TELECOM Room A23M Code 230566  OPTOELECTRONICS & PHOTOVOLTAIC TECHNOLOGY Room A26P, Code 230569	FROM COOLING AND TRAPPING Room A23M Code 230579  MEASURING WITH LIGHT Room A26P, Code 230573	BEAM PROPAGATION AND FOURIER OPTICS Room A23M Code 230553	BEAM PROPAGATION AND FOURIER OPTICS Room A23M Code 230553	FROM COOLING AND TRAPPING Room A23M Code 230579  MEASURING WITH LIGHT Room A26P, Code 230573
17:00-18:00					
18:00-19:00		BEAM PROPAGATION AND FOURIER OPTICS Room A23M Code 230553		PHOTONICS MATERIALS AND METAMATERIALS Room A23M Code 230562	
19:00-20:00					

**Notes:** Courses that overlap in time (in red) cannot be chosen simultaneously (Quantum Optics/Active&Spectral Imaging, From Cooling and Trapping/ Measuring with Light, and Fiber&Telecom / Optoelectronics&Photovoltaic Technology).

# Blocks 1A and 1B: Exams, Labs and Activities

	MONDAY 20 NOVEMBER	TUESDAY 21 NOVEMBER	WEDNESDAY 22 NOVEMBER	THURSDAY 23 NOVEMBER	FRIDAY 24 NOVEMBER	
14:00-17:00	<p><b>OPTOELECTRONICS &amp; PHOTOVOLTAIC TECHNOLOGY</b> Room A26P</p> <p><b>FIBERS AND TELECOM</b> Room A23M</p>	<p><b>QUANTUM OPTICS</b> Room A23M</p> <p><b>ACTIVE AND SPECTRAL IMAGING</b> Room A26P</p>	<p><b>INTRODUCTION TO PHOTONICS</b> Room A23M</p>	<p><b>BEAM PROPAGATION AND FOURIER OPTICS</b> Room A23M</p>	<p><b>FROM COOLING AND TRAPPING</b> Room A23M</p> <p><b>MEASURING WITH LIGHT</b> Room A26P</p>	
17:00-20:00	<p><b>PHOTONICS MATERIALS AND METAMATERIALS</b> Room A23M</p>					
	MONDAY 27 NOVEMBER	TUESDAY 28 NOVEMBER	WEDNESDAY 29 NOVEMBER	THURSDAY 30 DECEMBER	FRIDAY 01 DECEMBER	MONDAY & TUESDAY 04/05 DECEMBER
15:00-19:00	<p><b>LABORATORY SESSION 2</b></p> <p>(UPC / UAB / UB)</p>	ACTIVITIES DAY 1	ACTIVITIES DAY 2	ACTIVITIES DAY 3	<p><b>LABORATORY SESSION 2</b></p> <p>(UPC / UAB / UB)</p>	EXTRA Activities

**Notes:** The exams for the courses in red (Optoelectronics & Photovoltaic/Fibers & Telecom, Quantum Optics/Active & Spectral Imaging, and From Cooling and Trapping/Measuring with Light) overlap in time. During the Activity days, several visits to research labs will be scheduled (including UPC, UAB, UB and ICFO).

## Block 2: Universitat Politècnica de Catalunya (UPC), Campus Nord

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
10:00-11:00			SEMINARS Room N/A		
11:00-12:00					
12:00-13:00					
13:00-14:00					
14:00-15:00	<b>VISUAL OPTICS &amp; BIOPHOTONICS</b> Room A4 205 Code 230582	NONLINEAR OPTICS Room A4 205 Code 230563	<b>VISUAL OPTICS &amp; BIOPHOTONICS</b> Room A4 205 Code 230582	NONLINEAR OPTICS Room A4 205 Code 230563	LASER SYSTEMS AND APPLICATIONS Room A4 205 Code 230570
15:00-16:00					
16:00-17:00	<b>BUSINESS AND PATENTS IN PHOTONICS</b> Room A4 205 Code 230552	LASER SYSTEMS AND APPLICATIONS Room A4 205 Code 230570	<b>IMAGE PROCESSING IN BIOPHOTONICS</b> Room A4 205 Code 230561	<b>BUSINESS AND PATENTS IN PHOTONICS</b> Room A4 205 Code 230552	QUANTUM SIMULATORS, Room A4 205, Code 230578
17:00-18:00					
18:00-19:00	QUANTUM SIMULATORS, Room A4 205, Code 230578		<b>SEMICONDUCTOR PHOTONICS</b> Room A4 206 Code N/A	INTEGRATED PHOTONICS Room A4 205 Code 230567	INTEGRATED PHOTONICS Room A4 205 Code 230567
19:00-20:00					

**Notes:** Courses that overlap in time (in red) cannot be chosen simultaneously (Visual Optics & Biophotonics / Advanced Quantum Optics, and Image Processing in Biophotonics/Semiconductor Photonics).

## Block 2: Exams, Labs and Activities

	MONDAY 05 FEBRUARY	TUESDAY 06 FEBRUARY	WEDNESDAY 07 FEBRUARY	THURSDAY 08 FEBRUARY	FRIDAY 09 FEBRUARY
14:00-17:00	<b>VISUAL OPTICS &amp; BIOPHOTONICS</b> Room A4 205  <b>ADV. QUANTUM OPTICS WITH APPLICATIONS</b> Room A4 206	LASER SYSTEMS AND APPLICATIONS Room A4 205	<b>IMAGE PROCESSING IN BIOPHOTONICS</b> Room A4 205  <b>SEMICONDUCTOR PHOTONICS</b> Room A4 206	NONLINEAR OPTICS Room A4 205	QUANTUM SIMULATORS Room A4 205
17:00-20:00				INTEGRATED PHOTONICS Room A4 205	
	MONDAY 12 FEBRUARY	TUESDAY 13 FEBRUARY	WEDNESDAY 14 FEBRUARY	THURSDAY 15 FEBRUARY	FRIDAY 16 FEBRUARY
15:00-19:00	LABORATORY SESSION 3  (UPC / UAB / UB)	ACTIVITIES DAY 4	ACTIVITIES DAY 5	ACTIVITIES DAY 6	LABORATORY SESSION 3  (UPC / UAB / UB)

**Notes:** The exams for the courses in red (Visual Optics & Biophotonics/Adv. Quantum Optics and Image Processing in Biophotonics/Semiconductor Photonics) overlap in time.  
The specific timetable for the activities days will be coordinated by the corresponding professors.



## Block 3: Universitat Politècnica de Catalunya (UPC), Campus Nord

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
10:00-11:00			SEMINARS Room N/A		
11:00-12:00					
12:00-13:00					
13:00-14:00					
14:00-15:00	MANAGING LIGHT WITH DEVICES, Room A4 205, Code 230572	ULTRAFAST AND ULTRAIINTENSE LIGHT Room A4 205 Code 230565	MANAGING LIGHT WITH DEVICES, Room A4 205, Code 230572	ULTRAFAST AND ULTRAIINTENSE LIGHT Room A4 205 Code 230565	EXPERIMENTAL OPTICAL TECHNIQUES IN BIOLOGY (@ICFO) Code 230554
15:00-16:00		OPTICAL DESIGN Room A4 206 Code 230587		OPTICAL DESIGN Room A4 206 Code 230587	
16:00-17:00	BUSINESS AND PATENTS IN PHOTONICS Room A4 205 Code 230552	MACHINE LEARNING ON CLASSICAL AND QUANTUM DATA Room A4 205 Code 230584	BUSINESS AND PATENTS IN PHOTONICS Room A4 205 Code 230552	MACHINE LEARNING ON CLASSICAL AND QUANTUM DATA Room A4 205 Code 230584	
17:00-18:00					
18:00-19:00	NANOPHOTONICS Room A4 205 Code 230564	3D LIGHT CONTROL FOR BIOLOGICAL APPLICATIONS Room A4 205 Code N/A	NANOPHOTONICS Room A4 205 Code 230564	3D LIGHT CONTROL FOR BIOLOGICAL APPLICATIONS Room A4 205 Code N/A	
19:00-20:00		QUBITS APPLICATIONS Room A4 206 Code N/A		QUBITS APPLICATIONS Room A4 206 Code N/A	

**Notes:** Courses that overlap in time (in red) cannot be chosen simultaneously (Ultrafast and Ultraintense Light/Optical Design, Qubits applications /3D Light Control for Biological Applications).

## Block 3: Exams, Labs and Activities

	MONDAY 08 APRIL	TUESDAY 09 APRIL	WEDNESDAY 10 APRIL	THURSDAY 11 APRIL	FRIDAY 12 APRIL
14:00-17:00	MANAGING LIGHT WITH DEVICES Room A4 205	<div style="color: red; text-align: center;"> <b>ULTRAFAST &amp; ULTRAIINTENSE LASER LIGHT</b>                      Room A4 205                 </div> <div style="color: red; text-align: center;"> <b>OPTICAL DESIGN</b>                      Room A4 206                 </div>	<div style="text-align: center;"> <b>BUSINESS AND PATENTS IN PHOTONICS</b>                      Room A4 205                 </div>	<div style="color: red; text-align: center;"> <b>3D LIGHT CONTROL FOR BIOLOGICAL APPLICATIONS</b>                      Room A4 205                 </div> <div style="color: red; text-align: center;"> <b>QUBITS APPLICATIONS</b>                      Room A4 206                 </div>	EXPERIMENTAL OPTICAL TECHNIQUES IN BIOLOGY @ICFO
17:00-20:00	NANOPHOTONICS Room A4 205	MACHINE LEARNING ON CLASSICAL AND QUANTUM DATA Room A4 205			
	MONDAY 15 APRIL	TUESDAY 16 APRIL	WEDNESDAY 17 APRIL	THURSDAY 18 APRIL	FRIDAY 19 APRIL
15:00-19:00	LABORATORY SESSION 4  (UPC / UAB / UB)	ACTIVITIES DAY 7	ACTIVITIES DAY 8	ACTIVITIES DAY 9	LABORATORY SESSION 4  (UPC / UAB / UB)

**Notes:** The exams for the courses in red (Ultrafast and Ultraintense Light/Optical Design and 3D Light Control/Qubits Applications) overlap in time.  
 The specific timetable for the activities days will be coordinated by the corresponding professors.

## Block 4: Master Thesis (22 Apr to 09 Sep, 2024)

**BLOCK 4** is devoted to the Master Thesis work.

The presentations will be scheduled in 2 sessions in **July and September 2024**.

## Notes

### **SEMINARS:**

A **3 hours/week slot** is reserved for *seminars*. These seminars will be organized occasionally and will be announced a few weeks in advance and held in Campus Nord, when possible. They are part of the Master program and the assistance is compulsory.

### **EXAMS AND EVALUATION PROCEDURE:**

Professors of each course decide the assessment procedure, as pointed out in the Course Contents. Exams are scheduled at the end of each teaching block.

Exceptionally, other examination activities might be performed outside the exams week schedule.

### **OTHER POSSIBLE CIRCUMSTANCES**

Under unexpected circumstances, lectures may be cancelled. In this case, re-schedule will be carried out provided that both students and professors agree.

All courses will be taught in-classroom.

# Annex: Classroom distribution for UB lectures

