

Master in Quantum Science and Technology, Barcelona

Practical Details, v1.75, 21/06/2021

2021-2022

quantummasterbarcelona.eu/



Participating Institutions



Important dates



REGISTRATION:

6th - 10th of September 2021

COURSE STARTS:

13th September 2021

ENTREPRENEURSHIP WEEK

4th to 7th April 2022

ANNUAL CAREER SYMPOSIUM

8th April 2022

MASTER THESIS SELECTION

Sep 13th-Dec 23rd

INTERNSHIP & DIRECTED RESEARCH PROJECTS

From Oct 11th

TEACHING BLOCKS:

BLOCK 1: Sep 13th-Oct 8th: Quantum Core Subjects (Mandatory)

BLOCK 2: Oct 11th-Nov 9th: Quantum Core Subjects + Electives 1

BLOCK 3: Nov 10th-Nov 26th_ Electives 1

BLOCK 4: Dec 8th-Feb 4th Electives 2

BLOCK 5: Apr 4th-Apr 8th Entrepreneurship & Innovation Week + Annual Career Symposium

BLOCK 6: Feb 14th-Mid July: Master Thesis

LARGE HOLIDAYS:

Christmas: Dec 23rd-Jan 7th

Easter: Apr 14th-Apr 18th

Calendar. Academic year 2021-2022



September	October	November	December
<ul style="list-style-type: none">- Master starts 13th- Quantum Core	<ul style="list-style-type: none">- Quantum Core- Electives 1	<ul style="list-style-type: none">- Exams Quantum Core- Electives 1	<ul style="list-style-type: none">- Electives 2
January	February	March	April
<ul style="list-style-type: none">- Electives 2	<ul style="list-style-type: none">- Electives 2- Exams electives- Master Thesis	<ul style="list-style-type: none">- Master Thesis	<ul style="list-style-type: none">- Master Thesis- Entrepreneurship & Innovation- Annual Career Symposium- Reevaluation
May	June	July	August / September
<ul style="list-style-type: none">- Master Thesis	<ul style="list-style-type: none">- Master Thesis	<ul style="list-style-type: none">- Master Thesis defense	Well deserved Holidays + Reevaluation Master Thesis



Mandatory Quantum Core subjects

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00-09:00	QUANTUM INFORMATION THEORY		QUANTUM INFORMATION THEORY		QUANTUM INFORMATION THEORY
09:00-10:00					
10:00-11:00		ADVANCED QUANTUM MECHANICS		ADVANCED QUANTUM MECHANICS	ADVANCED QUANTUM MECHANICS
11:00-12:00					
12:00-13:00	CONDENSED MATTER		CONDENSED MATTER	CONDENSED MATTER	
13:00-14:00					

BLOCK 2: OCT 11TH - NOV 9TH, FACULTAT DE FISICA, UB



	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00-09:00	QUANTUM INFORMATION THEORY		QUANTUM INFORMATION THEORY		QUANTUM INFORMATION THEORY
09:00-10:00					
10:00-11:00		ADVANCED QUANTUM MECHANICS		ADVANCED QUANTUM MECHANICS	ADVANCED QUANTUM MECHANICS
11:00-12:00					
12:00-13:00	CONDENSED MATTER		CONDENSED MATTER	CONDENSED MATTER	
13:00-14:00					
14:00-15:00		QUANTUM OPTICS (QUANTOP)			QUANTUM OPTICS (QUANTOP)
15:00-16:00					
16:00-17:00	QUANTUM STATISTICAL INFERENCE	FROM COOLING AND TRAPPING (QUANTOP)	QUANTUM STATISTICAL INFERENCE	FROM COOLING AND TRAPPING (QUANTOP)	
17:00-18:00					
18:00-19:00	SOLID STATE SIMULATION TECHNIQUES	QUANTUM FIELD THEORY	SOLID STATE SIMULATION TECHNIQUES	QUANTUM FIELD THEORY	
19:00-20:00					

BLOCK 3: NOV 10TH - NOV 26TH, FACULTAT DE FISICA, UB



	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00-09:00					
09:00-10:00					ELECTRONICS FOR THE QTECH LAB
10:00-11:00					
11:00-12:00					
12:00-13:00					
13:00-14:00					
14:00-15:00		QUANTUM OPTICS (QUANTOP)			QUANTUM OPTICS (QUANTOP)
15:00-16:00					
16:00-17:00	QUANTUM STATISTICAL INFERENCE	FROM COOLING AND TRAPPING (QUANTOP)	QUANTUM STATISTICAL INFERENCE	FROM COOLING AND TRAPPING (QUANTOP)	
17:00-18:00					
18:00-19:00	SOLID STATE SIMULATION TECHNIQUES	QUANTUM FIELD THEORY	SOLID STATE SIMULATION TECHNIQUES	QUANTUM FIELD THEORY	
19:00-20:00					

BLOCK 4: DEC 8TH - FEB 4TH, FACULTAT DE FISICA, UB



	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00-09:00					
09:00-10:00	QUANTUM SENSING		QUANTUM SENSING		ELECTRONICS FOR THE QTECH LAB
10:00-11:00		QUANTUM MATERIALS		QUANTUM MATERIALS	
11:00-12:00	ADVANCED QUANTUM INFORMATION	QUANTUM MONTECARLO	ADVANCED QUANTUM INFORMATION	QUANTUM MONTECARLO	
12:00-13:00					
13:00-14:00					
14:00-15:00	ADV QUANTUM OPTICS (QUANTOP)	QTECH SUPERCONDUCTING CIRCUITS	ADV QUANTUM OPTICS (QUANTOP)	QTECH SUPERCONDUCTING CIRCUITS	TENSOR NETWORKS
15:00-16:00					
16:00-17:00	QUANTUM COMPUTING	QUANTUM SIMULATORS (QUANTOP)	TENSOR NETWORKS	QUANTUM COMPUTING	QUANTUM SIMULATORS (QUANTOP)
17:00-18:00					
18:00-19:00	QUANTUM COMMUNICATIONS	MACHINE LEARNING	QUANTUM COMMUNICATIONS	MACHINE LEARNING	
19:00-20:00					

BLOCK 5: ENTREPRENEURSHIP AND INNOVATION WEEK @STARTUB



	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:30-09:30					
09:30-10:30	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Annual Career Symposium (@ICFO)
10:30-11:30					
11:30-12:00					
12:00-13:00	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Entrepreneurship and Innovation	
13:00-14:00					
14:00-15:00					
15:00-16:00	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Entrepreneurship and Innovation	Entrepreneurship and Innovation	
16:00-17:00					
17:00-18:00					
18:00-19:00					
19:00-20:00					



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.

EXAMS MANDATORY SUBJECTS (QUANTUM CORE)

ADVANCED QUANTUM MECHANICS	Nov 15th
CONDENSED MATTER	Nov 18th
QUANTUM INFORMATION THEORY	Nov 22nd

EXAMS ELECTIVE SUBJECTS (WHEN NEEDED)

ELECTIVES 1: Nov 29th-Dec3rd
ELECTIVES 2: Feb 7th-Feb11th

REEVALUATION EXAMS

Apr 19th-Apr22nd

MASTER THESIS DEFENSE

Jul 11-Jul 22nd

MASTER THESIS REEVALUATION

Sep5th-Sep9th



SEMINARS: A 3 hours/week slot is reserved for seminars. These seminars will be announced few weeks in advance and there will be held in Facultat de Física (UB), when possible. They are part of the Master program and the assistance is compulsory.

OTHER POSSIBLE CIRCUMSTANCES: Under unexpected circumstances, lectures may be cancelled. In this case, reschedule will be carried out provided that both students and professors agree.