**TIMETABLE for the Joint European Master in NUCLEAR PHYSICS in Spain**

**Academic year 2026-2027**

The students have to follow the following topics in the first semester, all of them in Seville (except Nuclear Structure):

**Quantum Mechanics** (60 hours)
**Atomic and Plasma Physics** (60 hours)
**Basic Experimental and Applied Laboratory** (45 hours = 30 h theory + 15 h lab (5 experiments x 3 h/exp))
**Computing and Numerical Methods** (45 hours)
**Nuclear Structure** (30 h intensive during two weeks January 11-15, (on-line) and January 18-22 (in person), 2027) **in Madrid**
(Trip to Caen January 25-27 January)

There will be an intensive Spanish course for beginners (dates to be determined) in the mornings.

Students from paths 1 and 3 are expected to be in Sevilla until February 20th, 2027.

During last week of February students in path 1 (Experiments) and path 3 (Applications) have to move to Padova and Catania, respectively. They are expected to be there by February 23rd, 2027.

Second semester (for the **theory path-2**)

**Introduction to Nuclear Reactions** (30 h intensive during four weeks February 8 – March 5, 2027) in Sevilla

**Many-Body Theories in Nuclear Physics** (30 h intensive during four weeks February 8 – March 5, 2027) in Sevilla

**Relativistic Quantum Theory: Nuclear Processes** (30 h intensive during the weeks March 8-12 (on-line) & March 15-19 (in person), 2027) in Sevilla

**Weak Interactions** (30 h intensive during the weeks March 29 – April 2 (on line) & April 5-9 (in-person), 2027) in Sevilla

**Elective, one of the following**

- **Hadron Physics** (30 h intensive during the weeks April 12-16 (on-line) & April 19-22 (in person), 2027) in Barcelona
- **Nuclear Astrophysics** (30 h intensive during the weeks April 26 - April 30 (in person) & May 3-7 (on-line), 2027) in Barcelona

Acronyms:
**QM = Quantum Mechanics**
**A&P = Atomic and Plasma Physics**
**BEAL = Basic Experimental and Applied Laboratory**
**CNM = Computing and Numerical Methods**
**NS = Nuclear Structure: properties and models**
**MBT = Many-Body theories in Nuclear Physics**
**RQT = Relativistic Quantum Theory: Nuclear Processes**
**WI = Weak Interactions**
**HP= Hadron Physics***
**NA = Nuclear Astrophysics***
**NR = Introduction to Nuclear Reactions**
***Each student has to choose one of these subjects**

**WEEKS**

| | | | | |
|---|---|---|---|---|
| **40: October 2** | **41: October 5-9** | | **42: October 13-16** | **43: October 19-23** |
| **44: October 26-30** | **45: November 3-6** | | **46: November 9-13** | **47: November 16-20** |
| **48: November 23-27** | **49: Nov. 30 – Dec. 4** | | **50: December 9-11** | **51 December 14-18** |

| Lectures | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 10:00-13:30 | BEAL laboratory GROUP 1 | BEAL laboratory GROUP 2 | BEAL laboratory GROUP 3 | BEAL laboratory GROUP 4 | BEAL laboratory GROUP 5 |
| | Weeks 41, 43, 44, 45, 46, and 47 | | | | |

| Lectures | Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|---|
| 15:00-17:00 | A&P | QM | A&P | QM | QM |
| 17:00-17:30 | | | | | |
| 17:30-19:00 | CNM | BEAL (theory) | BEAL (theory) | A&P | CNM |
| 19:00-19:30 | CNM | | | A&P | CNM |
| 19:30-20:00 | CNM | | | | CNM |
| | Weeks 40-51 | | | | |

**QM and A&P (60 hours)**
**Starting date: October 2, 2026 (Week number 40) –**
**Ending date: December 18, 2026 (week: 51) (6 hours/week)**
**Final Exams:**

- QM: January 29th
- A&P: February 1st

**BEAL (45 hours)**
**Starting date:**
**THEORY (30 hours): October 2, 2026 (week number 40) –**
**Ending date: December 18, 2026 (week: 51) (3 hours/week)**
LAB Group 1 (15 hours): weeks 41, 43-47, **on Monday**
LAB Group 2 (15 hours): weeks 41, 43-47, **on Tuesday**
LAB Group 3 (15 hours): weeks 41, 43-47, **on Wednesday**
LAB Group 4 (15 hours): weeks 41, 43-47, **on Thursday**
LAB Group 5 (15 hours): weeks 41, 43-47, **on Friday**
**Exam:**
Final Exam: February 3th

**CNM (45 hours)**
**Starting date:**
**THEORY (45 hours): October 2, 2026 (week number 40) –**
**Ending date: December 18, 2026 (week: 51)** (4,5 hours/week)
Evaluation (presentation of projects): January 7-8

**NS**
**Teaching period:** weeks 2-3, January 11-15 (on-line) + January 18-22 (in person), 2027 in MADRID
Exam: February 5, 2027 in Sevilla

**January 25-27, 2027 visit to CAEN (France)**

**SECOND SEMESTER**

**NR**
**Teaching period:** February 8 – March 5, 2027 (in person) in SEVILLA
Exam: May 14, 2027.

**MBT**
**Teaching period** February 8 – March 5, 2027 (in person) in SEVILLA
Exam: May 10, 2027

**RQT**
**Teaching period:** March 9-13 (on-line) & March 16-20 (in person) 2027 in SEVILLA
Exam: May 17, 2027

**WI**

**Teaching period:** March 29- April 2 (on line) & April 5-9 (in-person) 2027, in SEVILLA
Exam: May 21, 2027

**HP***
**Teaching period:** April 12-16 (on-line) & April 19-22 (in person) 2027, in BARCELONA
Exam: May 26, 2027

**NA***
**Teaching period:** April 26-30 (in person) & May 3-7 (on-line), 2027 in BARCELONA
Exam: May 31, 2027

* each student has to select one of these topics

## Calendar and mobility in 2027:

| Subject | ECTS | Place | Dates | Character | EXAMS |
|---|---|---|---|---|---|
| Nuclear Structure: Properties and Models | 6 | Madrid | 11-15 January 2027 (on-line) 18-22 Jan 2027 (in person) | Compulsory | 5 February 2027 |
| Introduction to Nuclear Reactions | 6 | Sevilla | February 8 – March 5, 2027 (in person) | Compulsory for path2 students | 14 May 2027 |
| Many-Body Theories in Nuclear Physics | 6 | Sevilla | February 8 – March 5, 2027 (in person) | Compulsory for path2 students | 10 May 2027 |
| Relativistic Quantum Mechanics: Nuclear Processes | 6 | Sevilla | March 8-12 2027 (on-line) March 15-19 2027 (in person) | Compulsory for path2 students | 17 May 2027 |
| Weak Interactions | 6 | Sevilla | March 29- Apr. 2 2027 (on line) April 5-9 2027 (in-person) | Compulsory for path2 students | 21 May 2027 |
| Hadron Physics | 6 | Barcelona | April 12-16 2027 (on-line) April 19-22 2027 (in person) | Elective for path2 students | 26 May 2027 |
| Nuclear Astrophysics | 6 | Barcelona | April 26-30 2027 (in person) May 3-7 2027 | Elective for path2 students | 31 May 2027 |

| | | | | | |
|---|---|---|---|---|---|
| | | | (on-line) | | |

**In case of fail in one or more subjects, the student will have one extra opportunity in the period June 14 to July 17 of 2027.**
**For S3, the lectures at Caen (France) start in September 1st, 2027.**

End of evaluation for subjects in S1: February 7
End of evaluation for subjects in S2: May 31

**End first call for subjects in S1 & S2: May 31**

Second call: period for exams for who failed in subjects in S1 and/or S2:

- S1 subjects: June 14 to June 25.
- S2 subjects: July 3 to July 14.

**End second call for subjects in S1 & S2: July 14**