



SPECTROSCOPY IN GEMOLOGY

5-DAY INTENSIVE COURSE

OCTOBER 19-23, 2026, CENTRO OROMARE, MARCIANISE (CE), ITALY

Course schedule

Day one

- Introduction to spectroscopy, the importance of reliable sample collections.
- UV-Vis-NIR spectroscopy. Techniques. Demo and explanation of the instrumentation, Gemological applications for diamonds and colored stones.
- Practical demonstration of UV-Vis-NIR spectroscopy.
- Introduction to vibrational spectroscopy.
- Raman spectroscopy. The Raman effect. Demo and explanation of the instrumentation, gem identification, treatments. Confocal Raman spectroscopy. Limitations
- Practical demonstration of Raman spectroscopy.

Day two

- Quiz check
- Photoluminescence (PL) spectroscopy. Demo and explanation of the instrumentation. Liquid nitrogen immersion technique for diamonds. Gem identification, treatments.
- Practical demonstration of Photoluminescence spectroscopy.
- Fourier Transform InfraRed spectroscopy (FTIR). Demo and explanation of the instrumentation. Absorption technique for diamonds and colored stones. Treatments. Specular reflection technique for gem identification.
- Practical demonstration of FTIR spectroscopy.

Day three

- Quiz check
- Fluorescence spectroscopy. Demo and explanation of the instrumentation. Identification of natural diamonds. Identification of colored stones. Treatments. Fluorescence microscopy and imaging.
- Practical demonstration of Fluorescence spectroscopy.
- XRF spectroscopy. Demo and explanation of the instrumentation. Trace elements identification. Gemological applications.

Day four

- Quiz check
- Laser-Induced Breakdown Spectroscopy (LIBS) – Explanation of the instrumentation. Theoretical insights into light-element detection and semi-quantitative analysis.
- Laser Ablation ICP-MS (LA-ICP-MS) – Explanation of the instrumentation. Theoretical coverage of high-sensitivity trace-element analysis for origin determination.

Day five

- Quiz check
- Full-day final practical session with a collection of more than 100 samples specifically selected to cover the main cases for diamonds and colored stones.
- Multi-instrumentation practical approach to the main gemological issues from identification to treatments.

Quiz

At the conclusion of each course chapter, students will be provided with a questionnaire that must be completed and returned before the start of the following day's lesson

Schedule

The five sessions run from 9:00–13:00 and 14:00–16:30, with a 15 mins coffee-break at 11 and one-hour lunch break.

Materials

Bring a pencil and a notebook. All other instruments are provided by MAGILABS USA; personal equipment and samples may also be used.

Entry Requirements

No prior spectroscopy background is necessary and the course is open to all, but a robust background in gemology is required.

The MAGILABS team reserves the right to approve participation after reviewing each candidate's competencies.

Qualification

The participants who will pass the exam will receive the Magilabs "Gemological Spectroscopy Certificate".

Venue

The course is held at the Oromare Centro Orafo Produttivo, Strada Provinciale 22, Km 1.750 – 81025 – Marcianise (CE)

HOTELS INFO & HOW TO REACH US

Recommended Hotel in Caserta

For your convenience, we highly recommend staying at [Royal Caserta Hotel](#), perfectly located near the Caserta Train Station and just a short walk from the magnificent [Royal Palace of Caserta \(Reggia di Caserta\)](#), a spectacular UNESCO World Heritage site.

We strongly advise booking your accommodation in this specific area. During the days of the course, we will be organizing a dedicated transportation service for our attendees. This daily transport will pick you up in the morning from the hotel area and take you directly to our course venue, the **Centro Orafo Oromare** (located about 12 km from Caserta). At the end of each training day, we will safely bring you back to Caserta, allowing you to relax and enjoy the historic city center without worrying about commuting.



GETTING TO CASERTA TRAIN STATION FROM ROME AND NAPLES AIRPORTS

For attendees arriving from abroad, we recommend the international airports of Rome Fiumicino (FCO), approximately 220 km from Caserta, and Naples Capodichino (NAP), approximately 30 km away.

If you are flying into Italy for our course, this guide will help you navigate public transport from both Rome and Naples directly to the Caserta train station area.

✈ From Rome Fiumicino Airport (FCO)

Since direct buses bypass the city center, taking the train is the fastest and most direct way to get to Caserta from Rome Fiumicino Airport (Leonardo da Vinci).

- **Step 1: The [Leonardo Express to Rome Termini](#).** Follow the airport signs to the railway platform. Board the “Leonardo Express”, a non-stop airport

shuttle train that takes exactly 32 minutes to reach Rome's central railway hub (Roma Termini).

- **Step 2: Train to Caserta.** Once at the central station, transfer to a direct train heading south to **Caserta**. You can choose between:
 - **High-Speed Trains (Frecciarossa, Frecciargento, or Italo):** The fastest option. The journey takes about 1 hour and 5 minutes. Tickets are available for purchase on the [Trenitalia](#) (choosing Frecciarossa or Frecciargento) and [Italo](#) websites.
 - **Regional (Regionale Veloce) or Intercity Trains:** More budget-friendly, but the journey takes around 2 to 2.5 hours. Tickets are available for purchase on the [Trenitalia website](#).

All these trains will drop you directly at the Caserta FS train station platforms.

⚠ Important Travel Warning: When booking your travel, please note that several private coach companies operating from Rome Fiumicino Airport (such as FlixBus or Fiumicino Express) do not stop at the central train station. Instead, they will drop you off at the highway exit *Caserta Nord* or in the neighboring municipality of *Casagiove*. To avoid needing a taxi upon arrival, please use the recommended trains, which drop you off right at the station.

✈ From Naples Capodichino Airport (NAP)

Arriving in Naples places you very close to the venue. The best option is to reach the station complex in Caserta with public transport.

Option 1: Alibus Shuttle + Train to Napoli Centrale

The bus and train combination is the best way to get to Caserta, with very frequent departures (except in the evening). However, if your flight arrives after 6:00 PM, we recommend taking a taxi.

- **Step 1: Alibus to Central Station** Exit the Naples airport and catch the "Alibus" airport shuttle. In about 15-20 minutes, it will bring you to the main Naples train station (Napoli Centrale / Piazza Garibaldi).
- **Step 2: Train to Caserta** From the central station, catch any [Trenitalia](#) Regional or Intercity train bound for Caserta. The train ride takes just 35 to 45 minutes and drops you exactly at your destination (Caserta FS).

Option 2: Taxi

The taxi lane is located in front of the arrivals. Flat rates are available for both urban and suburban routes (i.e. Caserta). They include extra charge: to/from airport, night ride, holiday, luggage and animals. Naples motorway toll and radio taxi call are not included. More info are available on the [Naples airport website](#).

GETTING TO CASERTA TRAIN STATION AND TO THE LOCATION VENUE BY CAR

If you are driving from other Italian regions or planning to rent a car at the airport, both the recommended hotel area and the course venue are easily accessible via the **A1 Highway** (Autostrada A1 Milano-Napoli).

Driving to the Recommended Hotel (Caserta Train Station Area)

- **Highway Exit:** Take the **Caserta Nord** exit on the A1 Highway.
- **Directions:** After the tollbooth, follow the road signs for *Caserta Centro*, *Reggia di Caserta*, and *Stazione FS*. The drive from the highway exit to the train station area takes about 10-15 minutes depending on traffic.
- **Parking Tip:** Since the recommended hotel is located in the city center, we recommend checking with the hotel in advance regarding private parking availability or nearby partner garages, as street parking in this area usually requires payment (blue lines).
- **Location of the Royal Caserta Hotel on Google Maps:**
<https://maps.app.goo.gl/pMX5Yd5Bfljj4qNt8>

Driving to the Course Venue (Centro Orafo Oromare)

If you prefer to drive your own car to the course instead of using our daily shuttle, or if you are arriving directly at the venue:

- **Highway Exit:** Take the **Caserta Sud - Marcianise** exit on the A1 Highway.
- **Directions:** Centro Orafo Oromare is located in the Marcianise industrial area. After exiting the highway, follow the signs for *Marcianise / Zona Industriale / Interporto* until you see the specific signs for *Centro Orafo Oromare*. **Location of Centro Orafo Oromare on Google Maps:**
<https://maps.app.goo.gl/h6YuVCiM1rgTJESU6>
- **From the Hotel to the Venue:** If you are driving from the Caserta Train Station area to the venue, it is approximately a 12 km drive (about 15-20 minutes) heading south towards Marcianise.
- **Parking Tip:** There is ample and convenient parking available directly at the Centro Orafo Oromare complex for all attendees.

Need help?

If you need any further information regarding accommodations during the course or transportation options, please contact info@rivistaitalianadigemmologia.com.