17th International Intensive Course Trieste
Sep 05th – 16th, 2022

PROGRAMME
Acknowledgements

We want to acknowledge the support of:

UNIVERSITÀ DEGLI STUDI DI PERUGIA

UNIVERSITY OF TRIESTE

UNIVERSITÉ TOULOUSE III-PAUL SABATIER

UNIVERSIDAD AUTÓNOMA DE MADRID

ERASMUS MUNDUS PROGRAMME
The teaching component of these subjects will be organized in an intensive course at the beginning of the academic year during 2 weeks. All students will attend this common course that presents the principles, formalism, and advanced applications of the most sophisticated methods in Theoretical Chemistry such as correlated methods (Coupled Clusters or Multireference methods), Ab initio Molecular Dynamics or QM/MM methodologies.

### Topics

1. Coupled cluster theory
2. CASF-SCF
3. Relativistic quantum chemistry
4. QMMM
5. DFT
6. Valence bond theory
7. Intramolecular forces
8. Time dependent quantum mechanics
9. Green’s function
10. Wave function analysis
11. Quantum Monte Carlo
12. Molecular dynamics: fundamentals and solvent effects
13. Ab-initio molecular dynamics
PRACTICAL INFORMATION
HOW TO GET TO TRIESTE?

There are 2 options to come to Trieste by plane from your country of departure:

- **Trieste airport**: “Ronchi dei Legionari” - 30 minutes train to Trieste Central railway station ([train timetable here](#)).

- **Venice Airport**: Venice Marco Polo Airport or Treviso Airport – Bus to Venezia Mestre railway station – then, train to Trieste Central railway station:

- **Train**: the company is [Trainitalia](#) (online purchase available)
FAMILIA UNIVERSITY AUXILIJUM, Largo Papa Giovanni XXIII, 7

Arrival on September 4th - Departure on September 17th

Rooms of 2 to 4 students, shared common space: bathroom, playroom - no kitchen service available.

Please form groups before July 22, which we will take into account as best we can when allocating rooms.

Go to the Uni by Trieste city bus:

Bus line n°17, at walking distance from the apartment. The entire trip lasts 20 minutes. You must buy the ticket at the newspaper shop before entering the bus, and on the bus, you must print it with the machines. Bus timetables are available here.

See trip below:
**FOOD**
Lunch will be offered at The « Mensa », the University catering service, from Monday to Friday. The weekends are free and at your expense.

**LECTURES**
The lectures will take place at the University. There are 2 lecture rooms:
- Building H3 room 2A (157 sits)
- Building A aula Venezian (180 sits)
Both rooms are equipped with Eduroam wifi and the lectures will also be broadcasted via Microsoft Teams (the official platform of Trieste University).

**PRACTICAL INFOS**

**Time difference**
UTC+2h (summer time)

**Electric voltage**
230 / 50 Hertz frequency. The electric sockets are like European standards. Blade plugs (US standard) must be used in conjunction with a 230 volts transformer, as well as an adaptor.

**Weather**
The weather in September is sunny and hot around 20°C to 30°C.

**Telephone codes**
Italian area code: +39
Taxi
If you want to order a taxi, you can call Radio Taxi: 040307730

Transfer to Perugia on Saturday 17th
A bus will take you from Trieste to Perugia on Saturday June 17. The transportation is taken care of by the university

Contacts during your stay

Mauro STENER – Intensive course chair, professor of physical chemistry: He will be your contact reference for any pedagogical information (content of the courses etc.) Please contact him at:
+39 333 4622848 – stener@units.it

Laura BERNARD – European Project Manager: She will be your contact reference during your stay for any administrative issue and practical information (accommodation, transportation, health, personal issues, emergencies.). Please, feel free to contact her for any question before and during your stay at:
+33 6 12 07 67 11 – laura.bernard1@univ-tlse3.fr

IMPORTANT!
The Toulouse Paul Sabatier university is closed from July 22 to August 22, so Mrs. Bernard Laura will be absent. If possible, please ask your questions before or after this date.
We are completing the document with relevant information. You can find it on our website, click on the logo to access.

You can also follow our updates on social networks: