

INFORMATION GUIDE FOR INTERNATIONAL STUDENTS AND STAFF 2014-2015



POLITEHNICA UNIVERSITY OF TIMISOARA

Information Guide for International Students and Staff

This is the Information Guide of Politehnica University of Timisoara. It contains all kinds of information for international students, staff and guests who spend time at our university. Here you will find practical information useful for any visitor, as well as a list of exchange courses. Although all the information in the guide has been checked carefully, it may be subject to change. Should you have any questions or concerns, please do not hesitate to contact us.

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CHAPTER 1. LIVING IN ROMANIA

1.1. DISCOVER ROMANIA

Coat of arms:



Flag:



National name: România (pronounced romi 'ni.a)

Neighbouring countries: Serbia, Hungary, Ukraine, Republic of Moldova, Bulgaria

Capital and largest city: Bucharest— 1.9 million inhabitants

Major cities: Iaşi, Cluj-Napoca, Timişoara, Constanţa, Craiova

Area: 238,391 km²

Highest mountains: Moldoveanu (2544 m), Negoiu (2534 m)

Major rivers: Danube (1075 km), Mureş (761 km), Prut (742 km)



Largest lake: Razelm-Sinoe (731 km²)

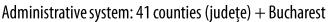
Sea shore: Black Sea (245 km)

Population: 20.2 million

Official language: Romanian

Political system: Semi-presidential republic





Member of NATO since 2004

Member of the European Union since 2007

Currency: Romanian leu (RON)

Time zone: EET (GMT+2)

Romania National Tourist Office: www.romaniatourism.com







UNESCO included on the World Heritage List seven areas in Romania:

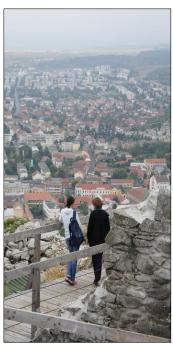
- 1. The Danube Delta The waters of the Danube, which flow into the Black Sea, form the largest and best preserved of Europe's deltas. The Danube Delta hosts over 300 species of birds as well as 45 freshwater fish species in its numerous lakes and marshes.
- 2. The churches of Moldavia The eight churches of northern Moldavia (Arbore, Humor, Moldoviţa, Pătrăuţi, Probota, Suceava, Gura Humorului, Suceviţa), built from the late 15th century to the late 16th century, their external walls covered in fresco paintings, are masterpieces inspired by



Byzantine art. They are authentic and particularly well preserved. Far from being mere wall decorations, the paintings form a systematic covering on all the facades and represent complete cycles of religious themes. Their exceptional composition, the elegance of the characters, and the harmony of the colors blend perfectly with the surrounding countryside.

- 3. The Dacian fortresses of the Orăştie Mountains Built in the 1st centuries B.C. and A.D. under Dacian rule, these fortresses show an unusual fusion of military and religious architectural techniques and concepts from the classical world and the late European Iron Age. The six defensive works, the nucleus of the Dacian Kingdom, were conquered by the Romans at the beginning of the 2nd century A.D.; their extensive and well-preserved remains stand in spectacular natural surroundings and give a dramatic picture of a vigorous and innovative civilization.
- 4. The historic centre of Sighişoara Founded by German craftsmen and merchants known as the Saxons of Transylvania, Sighişoara is a fine example of a small, fortified medieval town which played an important strategic and commercial role on the fringes of central Europe for several centuries.
- Constantine Brancoveanu, the monastery of Horezu, is a masterpiece of the 'Brancovan' style. It is known for its architectural purity and balance, the richness of its sculptural detail, the treatment of its religious compositions, its votive portraits and its painted decorative works. The school of mural and icon painting established at the monastery in the 18th century was famous throughout the Balkan region.
- **6.** The villages with fortified churches in Transylvania These Transylvanian villages with their fortified churches provide a vivid picture of the cultural landscape of southern Transylvania. The seven villages inscribed (Biertan, Câlnic, Dârjiu, Prejmer, Saschiz, Valea Viilor, Viscri), founded by the Transylvanian Saxons are dominated by their fortified churches, which illustrate building styles from the 13th to the 16th century.
- 7. The Wooden Churches of Maramures These eight churches (Bârsana, Budeşti, Deseşti, leud, Plopiş/Şiseşti, Poienile Izei, Rogoz/Târgu Lăpuş, Şurdeşti/Şiseşti) are outstanding examples of a range of architectural solutions from different periods and areas. They show the variety of designs and craftsmanship adopted in these narrow, high, timber constructions with their characteristic tall, slim clock towers at the western end of the building, either single- or double-roofed and covered by shingles. As such, they are a particular vernacular expression of the cultural landscape of this mountainous area of northern Romania.

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The most common weekend trip destinations for incoming Erasmus students are:

1.The cities of Banat and Transylvania. Arad, Alba-Iulia, Deva, Hunedoara, Reşiţa, Târgu Jiu, Sibiu, Cluj-Napoca or Oradea are all easily accessible by train or bus.

2.Iron Gates National Park and the Danube river gorges. Whether driving close to the Danube and stopping in the picturesque villages or boarding a ship for a two to four hours tour on the Danube, this is a great way of spending a sunny week-end.

3.During winter: the closest winter sports resorts are Semenic or Muntele Mic, both accessible as day trips from Timişoara. For longer trips, Poiana Braşov, Sinaia, Predeal, Păltiniş or Runcu are great choices.

4.International: Belgrade and Novi Sad in Serbia; Budapest and Szeged in Hungary; 14 country capitals are within a 700 km range from Timisoara. Various places around Europe are also accessible by low-cost airlines.



















1.2. GETTING HERE AND AROUND

By air: Timişoara's "Traian Vuia" International Airport (www.aerotim.ro) connects the city to many major cities in Europe. There are also domestic connections to all major airports in Romania. The airlines that operate flights from this airport include Austrian Airlines, Carpatair, Lufthansa, Tarom and Wizzair. The connection from Timisoara to the airport is made by buses Expres 4 and 4B. A bus ticket is 6 Lei = 1.5 Euro. The airports of Bucharest (transfer by air or train to Timişoara) or Budapest (transfer by train or minibus to Timişoara) might offer lower priced alternatives for guests coming from certain destinations.

By train: Romania has an extensive railway network, with trains being often the cheapest, though sometimes the slowest means of reaching remote places. We recommend using Inter Regio trains for the best travel conditions. Trains are a good travel option for reaching Budapest (Hungary), Belgrade (Serbia) or Vienna (via Arad). Discounts are available for students and groups of travellers.

By car: Don't forget to buy a "rovigneta" when entering the country (toll for using national roads valid 1 day, 7 days, 30 days, 90 days or 12 months) if you decide to bring your own car. In the student complex there are limited on-street (not guarded) parking places.

By taxi: Guests arriving at the airport at odd hours might need to take a taxi to reach the city. Updated phone numbers of various companies and details about normal fares can be obtained from the Department of International Relations.

Public transportation: It is unlikely for international students to use the public transportation system of Timisoara: the student complex is situated within walking distance from the city center. A regular one-way bus/tram ticket is 2 RON (\sim 0.45 EUR), while an express ticket is 2.5 RON (\sim 0.55 EUR). International students will have access to discounts after registration.

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1.3. MONEY

The national currency in Romania is called "leu" (plural "lei").

In circulation are currently the following coins:

- 1 ban (100 bani = 1 leu)
- 5 bani
- 10 bani
- 50 bani

and the following bank notes:

- 1 leu
- 5 lei
- 10 lei
- 50 lei
- 100 lei
- 200 lei
- 500 lei.

Please note that the 200 lei and 500 lei bank notes are less common and might be refused in smaller shops if they cannot give you proper change.

The exchange rate varies between 4.4 - 4.5 lei for 1 EUR.

We recommend that you buy in your home country a small amount of lei (enough to pay the taxi or bus fares, and cover the first expenses) in order to avoid exchanging money at the airport, where the exchange rate is less favorable.

The use of debit and credit cards is becoming more common in Romania, though they are still not as widely used as in some other countries. All major cards are accepted at hypermarkets, supermarkets, shopping centers, hotels, larger urban restaurants. ATMs are widely available in cities, and more rare in remote areas or villages.



1.4. TIMIŞOARA



Timisoara was born in the Middle Ages, as a small settlement needed for defense in the middle of the swamps. The city developed rapidly, and came to play a key role in Romanian and European history. In 1552 the city was conquered by the Ottomans and becomes the center of a large paşalâc. In 1716 the city is freed from the Ottomans by the Prince Eugene of Savoy and becomes a part of the Hasburg Empire. Over the next two centuries the city is heavily influenced by Vienna. Thousands of colonists from all over Europe come into the region of Banat, the swamps are drained and the Bega river is turned in a canal to link Timisoara to Vienna by ship. The economy is booming, the city reaches an continental importance, many of the city's technical premiers dating from this period, including the introduction of electrical street lighting and of the electrical —drawn trams. At the end of 1918, the citizens of Banat region decide to unite with Romania.

Situated less than 700 km away from 14 European capitals (Belgrade, Bratislava, Bucharest, Budapest, Ljubljana, Podgorica, Pristina, Prague, Sarajevo, Skopje, Sofia, Tirana, Vienna, Zagreb) in an ethno-culturally diverse region and being a thriving university centre generated a dynamic lifestyle and an open-minded community with a busy cultural agenda including dozens of festivals

of all kinds:

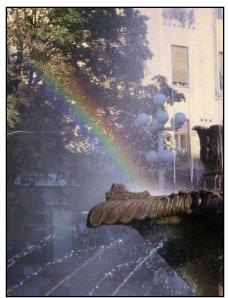
- •Bega Boulevard Festival (open-air, whole-family festival)
- •Hearts Festival (traditional music & dancing from around the world)
- PLAI Festival (world music)
- •Musical Timisoara International Festival (classical music)
- Jazz TM (jazz music)
- House Parade Festival (electronic music)
- Early Music Festival, Baroque Music Festival
- •Opera and Operetta Festival (open-air shows during the summer)
- •EuroThalia Festival (theatre in various European languages)
- European Film Festival
- •TimiShort Film Festival (short movies festival)
- CineCultura Festival (movie festival)
- French Film Festival
- Spanish Culture Days
- •Timişoara International Dance Festival (ballroom dancing)
- Salsa Addicted Festival
- Street Art International Festival
- Graffiti International Festival
- StudentFest (student arts festival)
- Wine Festival
- Beer Festival

and many many more.



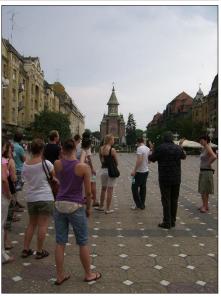


















1.5. THE ROMANIAN LANGUAGE

The Romanian alphabet has 31 letters, similar to the ones in the English alphabet, with the exception of five special letters called 'diacritics': ă (like the 'a' in English word 'musical'), ş (pronounced as 'sh'), ţ (pronounced 'ts'), â, î (have the same reading, without an English equivalent).

Certain letters (and letter combinations) are pronounced differently than they are in English:

- ă as in father
- î, â No English equivalent
- e as in tell
- i [e] as in pick
- j as in leisure
- ş as in shoe
- t [ts] as in fits
- ce as in check
- gi [dsi] as in gin
- ge [dse] as in gender
- chi [ki] as in skill
- che [ke] as in chemistry
- ghi [gi] as in give
- ghe [ge] as in guess

BASIC VOCABULARY

Personal data — Date personale

Surname – Nume

First name – Prenume

Date of birth — Data nașterii

Country— Tară

Address – Adresă

Street – Stradă

Number – Număr

Passport – Paşaport

Greetings — Formule de salut

Good morning — Bună dimineața!

Good afternoon – Bună ziua!

Good evening — Bună seara!

Good night — Noapte bună!

Goodbye – La revedere!

Hi! — Bună / Salut / Ceau (all informal)

Bye — Ceau / Pa

See you soon — Pe curând!

Conversation – Conversatie

My name is... – Numele meu este...

What is your name? — Cum vă numiți? (formal)

Cum te cheamă? (informal)

How are you? — Ce mai faceţi? (formal)

Ce mai faci? (informal)

I'm fine, thanks! — Bine, mulţumesc!

Please – Vă rog (formal) / Te rog (informal)

Thank you — Multumesc (formal) / Mersi (informal)

You're welcome — Cu plăcere!

Excuse me, I'm sorry — Scuze! /Îmi pare rău!

Enjoy your meal — Poftă bună!

Cheers! — Noroc!

Do you speak English? — Vorbiţi englezeşte?

Yes, a little – Da, puţin

Yes — Da

No - Nu

Maybe – Poate

I don't understand — Nu înțeleg

I don't know – Nu ştiu

How much does it cost? — Cât costă?

Price — Pret

Where is... – Unde este...

Is it far? – E departe?

I am lost — M-am pierdut

Can you show me on the map? — Îmi arătați pe hartă?

Here – Aici

There – Acolo

Towards — Spre

Could you call me a taxi? – Aţi putea să îmi chemaţi un taxi?

I am happy/sad/excited—Sunt fericit/trist/încântat

I am ill/worried/well — Sunt bolnav/îngrijorat/bine

Signs - Semne

Open / Closed — Deschis / Închis

Men / Women — Bărbaţi / Femei

Entrance / Exit — Intrare / leşire

No smoking — Fumatul interzis

Theatre - Teatru

Cinema - Cinema

Airport - Aeroport

Train station - Gară

Arrivals / Departure — Sosiri / Plecări

Police - Poliție

Post Office - Poştă

Exchange office — Casă de schimb valutar

Hospital - Spital

Fire department - Pompieri

University - Universitate

Church - Biserică

Emergency exit – leşire de urgenţă

Watch out! - Atenție!

Right - Dreapta

Left - Stânga

Straight forward — Drept înainte

Back — Înapoi

To be — A fi

I am — Eu sunt

You are — Tu eşti

He/she is — El/ea este

We are — Noi suntem

You are — Voi sunteți

They are - Ei/ele sunt

CHAPTER 2. POLITEHNICA UNIVERSITY OF TIMIŞOARA

2.1. BRIEF HISTORY

Politehnica University of Timisoara (UPT) is one of the biggest technical universities from Central and Eastern Europe. It was founded in 1920 as an answer to the need for engineers of the Romanian society in the context of the post WW1 economical recovery. During its 90 years of existence, Politehnica University of Timisoara produced over 100 000 engineers, greatly appreciated on the national and international level for their competence.

The study programmes are organized according to the Bologna paradigm. Over 13500 students are registered on various levels (Bachelor, Master, Doctoral and Postdoctoral), while 850 teaching staff and 900 administrative and auxiliary staff work within its framework. Politehnica University of Timisoara has 10 faculties: Faculty of Architecture and Urban Planning; Faculty of Automation and Computer Science; Faculty of Civil Engineering; Faculty of Electronics and Telecommunications; Faculty of Industrial Chemistry and Environmental Engineering; Faculty of Management in Production and Transportation; Faculty of Mechanical Engineering; Faculty of Engineering in Hunedoara.

Politehnica University of Timisoara owns an educational and research infrastructure — buildings and equipments — comparable with the most prestigious European universities. Important investments were made during the last years. The students of Politehnica University of Timisoara have at their disposal a modern student campus, comprising two cafeterias and 16 student residences, totalizing 5 500 accommodation places. All 1 800 student rooms are furnished, have Internet connection and cable television.

2.2. INTERNATIONALISATION

Politehnica University of Timişoara encourages students to spend part of their studies or to do an internship abroad. The university has over 180 bilateral Erasmus+ agreements and more than 100 framework cooperation agreements with universities from all over Europe, but also from Asia, North and South America. Every year more than 200 students do a study or industrial placement abroad, while over 100 students from partner institutions come to study or do an industrial placement under the supervision of an UPT coordinator.

Furthermore, UPT encourages the international mobility of its staff members and welcomes visiting lecturers from partner universities and companies. Every year, through the LLP-Erasmus and CEEPUS programmes, more than 100 teaching and administrative UPT staff members do a teaching or training mobility abroad, while over 50 foreign lecturers come teach in Timişoara. Guest lecturers are always welcomed, as they enable students who do not go abroad to come into contact with different perspectives and teaching methods, while reinforcing the link between the institutions.

Increasing the number of both incoming and outgoing students and staff is one of the goals of the Department for International Relations. By sharing our experience with the partner higher education institutions, and by collaborating with colleagues from abroad, we can improve the strategies, policies and practices of internationalization.



Above: Politehnica University of Timişoara's Rectorate

Below (from top left, counterclockwise): UPT Library, Faculty of Automation and Computer Science, Faculty of Electronics and Telecommunications, Faculty of Electrical and Power Engineering, Faculty of Mechanical Engineering, Sports Center 1, Faculty of Civil Engineering, Faculty of Architecture and Urbam Planning, Faculty of Communication Sciences





Faculty of Architecture and Urban Planning
Faculty of Civil Engineering
Faculty of Communication Sciences



Faculty of Mechanical Engineering



Faculty of Automation and Computer Science, Faculty of Electrical and Power Engineering Faculty of Electronics and Telecommunications



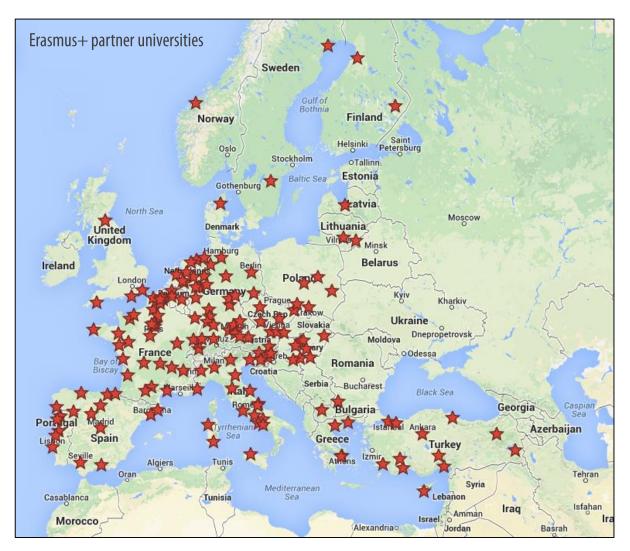
Faculty of Industrial Chemistry and Environmental Engineering



Faculty of Engineering in Hunedoara



Faculty of Management in Production and Transportation





2.3. ACADEMIC CALENDAR

THE 1ST SEMESTER of the academic year 2014/2015 for all years of study:

| a) 22.09.2014 — 21.12.2014 | TEACHING | (13 weeks) |
|---|---|------------|
| b) 22.12.2014 – 04.01.2015 | HOLIDAY | (2 weeks) |
| c) 05.01.2015 — 11.01.2015 | TEACHING | (1 week) |
| d) 12.01.2015 – 01.02.2015 | EXAM SESSION 1 (1st presentation) | (3 weeks) |
| e) 02.02.2015 – 08.02.2015 | HOLIDAY | (1 week) |
| f) 09.02.2015 – 22.02.2015 ¹ | EXAM SESSION 2 (2 nd presentation) | (2 weeks) |

THE 2nd SEMESTER of the academic year 2014/2015

For students in the first three years of bachelor studies, fifth year Architecture students and first year master students:

| a) 16.02.2015 – 12.04.2015 ^{1,2} | TEACHING | (8 weeks) |
|---|---|-----------|
| b) 13.04.2015 – 19.04.2015 | HOLIDAY | (1 week) |
| c) 20.04.2015 – 31.05.2015 | TEACHING | (6 weeks) |
| d) 01.06.2015 – 21.06.2015 | EXAM SESSION 3 (1st presentation) | (3 weeks) |
| e) 22.06.2015 – 05.07.2015 | EXAM SESSION 4 (2 nd presentation) | (2 weeks) |

For students in terminal years: fourth year bachelor students, third year students in Informatics, Public Administration and Communication

| a) 16.02.2015 – 05.04.2015 ² | TEACHING | (7 weeks) |
|---|-----------------------------------|-----------|
| b) 06.04.2015 - 12.04.2015 | ELABORATION OF BACHELOR THESIS | (1 week) |
| c) 13.04.2015 – 19.04.2015 | HOLIDAY | (1 week) |
| d) 20.04.2015 – 03.05.2015 ³ | EXAM SESSION 3 (1st presentation) | (2 weeks) |
| e) 04.05.2015 – 14.06.2015 | ELABORATION OF BACHELOR THESIS | (6 weeks) |
| f) 15.06.2015 – 28.06.2015 | DEFENSE OF BACHELOR THESIS | (2 weeks) |

For students in terminal years: sixth year students in Architecture, 2nd year master students

| a) 16.02.2015 — 12.04.2015 | ELABORATION OF DIPLOMA THESIS | (8 weeks) |
|----------------------------|--------------------------------|-----------|
| b) 13.04.2015 — 19.04.2015 | HOLIDAY | (1 week) |
| c) 20.04.2015 – 31.05.2015 | ELABORATION OF DIPLOMA THESIS | (6 weeks) |
| d) 01.06.2015 – 21.06.2015 | PRESENTATION OF DIPLOMA THESIS | (3 weeks) |

The re-examination session: 2 weeks, between 31.08.2015 - 13.09.2015.

2.4. ACADEMIC OFFER IN FOREIGN LANGUAGES

Politehnica University of Timişoara offers study programmes in Romanian, English, French and German. Please note that incoming exchange students can choose subjects normally taught in Romanian, as individual tutoring and examination in English, French or German can be arranged in most study fields. It might also be possible for an exchange student to prepare his/her bachelor, master or PhD thesis under the guidance of an UPT professor using a different language of communication (Hungarian, Russian, Italian, etc), though such requests have to be made well in advance and will be approved on a case-by-case basis. Optional subjects are taught only if a sufficient number of students choose that particular subject. This overview may be subject to change. For up-to-date information please check our website.

2.4.1. FACULTY OF ARCHITECTURE AND URBAN PLANNING

| Architecture and Urban Planning (Bachelor+Master) | | | | |
|---|------|---------------|----------|----------|
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of master's degree project in architecture and urban planning | 10 | 6 | Spring | EN,FR,DE |
| Furniture and Interior Design (Bachelor) | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree project in furniture and interior design | 10 | 3 | Spring | EN,FR,DE |
| <u> Urbanism and Territorial Planning (Master)</u> | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Theory on the city | 10 | 1 | Fall | EN |
| Methods and techniques of urban research | 10 | 1 | Fall | EN |
| Urban legislation, politics and management | 8 | 1 | Spring | EN |
| The city and the territory I, II | 8 | 2 | Fall | EN |
| Preparation of master's degree project | 15 | 2 | Spring | EN,FR,DE |

2.4.2. FACULTY OF AUTOMATION AND COMPUTER SCIENCE

| ECTS | Year of study | Semester | Language |
|------|-------------------|-----------------------------------|---|
| 5 | 4 | Spring | EN,FR,DE |
| 5 | 4 | Spring | EN,FR,DE |
| 5 | 3 | Spring | EN,FR,DE |
| 15 | 2 | Spring | EN,FR,DE |
| 15 | 2 | Spring | EN,FR,DE |
| 15 | 2 | Spring | EN,FR,DE |
| | 5 5 5 15 | 5 4 5 4 5 3 15 2 15 2 | 5 4 Spring 5 4 Spring 5 3 Spring 15 2 Spring 15 2 Spring 15 2 Spring |

| Preparation of master's degree project in information | | | | |
|--|----------|---------------|------------------|----------|
| technology | 15 | 2 | Spring | EN,FR,DE |
| Automotive Embedded Software (Master) | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Embedded systems I | 8 | 1 | Fall | EN |
| Software project management | 8 | 1 | Fall | EN |
| Software engineering I | 8 | 1 | Fall | EN |
| Data communications & applications to automotive | 6 | 1 | Fall | EN |
| Embedded systems II | 8 | 1 | Spring | EN |
| Communications skills | 7 | 1 | Spring | EN |
| Basic application know how | 8 | 1 | Spring | EN |
| Dynamic systems and stability in automotive control | 7 | 1 | Spring | EN |
| Optional: Fault detection and diagnosis | 7 | 2 | Fall | EN |
| Optional: Control of electrical drives | 7 | 2 | Fall | EN |
| Optional: Actuators in automotive systems | 7 | 2 | Fall | EN |
| Optional: Visual programming and modeling | 7 | 2 | Fall | EN |
| Optional: Advanced information security for embedded systems | 8 | 2 | Fall | EN |
| Optional: Advanced topics in control engineering and computer science: sensor networks | 8 | 2 | Fall | EN |
| Optional: Software engineering II | 8 | 2 | Fall | EN |
| Optional: Multi-agent systems | 8 | 2 | Fall | EN |
| Research activity | 15 | 2 | Spring | EN |
| Preparation and defending of dissertation thesis | 15 | 2 | Spring | EN |
| Computer Engineering (Master) | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Optional: Testing of computer systems | 9 | 1 | Fall | EN |
| Optional: Image processing and recognition | 9 | 1 | Fall | EN |
| Optional: Data transmission, coding & compression | 9 | 1 | Fall | EN |
| Optional: Emerging systems | 9 | 1 | Fall | EN |
| Optional: High-end interfaces & equipments | 9 | 1 | Fall | EN |
| Optional: Advanced digital signal processing | 9 | 1 | Fall | EN |
| Research topics in computer systems | 3 | 1 | Fall | EN |
| Optional: Advanced embedded systems | 9 | 1 | Spring | EN |
| Optional: Integrated information systems | 9 | 1 | Spring | EN |
| Optional: Cellular data networks | 9 | 1 | Spring | EN |
| Optional: Optic fiber transmissions | 9 | 1 | Spring | EN |
| Optional: Automatic design & optimization of VLSI circuits | | 1 | Spring | EN |
| Optional: Virtual measurement systems | 9 | 1 | Spring | EN |
| Introduction to research | 3 | 1 | Spring | EN |
| Optional: Robotic systems | 9 | 2 | Fall | EN |
| Optional: Emergent & collective intelligence systems | 9 | 2 | Fall | EN |
| Optional: Evolvable hardware | 9 | 2 | Fall Fall | EN |
| Optional: Advanced artificial intelligence Directed thesis research | 9 | 2 | Fall | EN |
| Research activity and internship | 3 15 | 2 2 | | EN EN |
| Master thesis development and defense | 15 15 | 2 | Spring Spring | EN |
| אומזכר נווכאה עבייבוטףוווכווג מווע עכוכווגכ | IJ | 4 | əpiniy | LIV |

| Information Technology (Master) | | | | |
|--|---|--|--|--|
| Subject | ECTS | Year of study | Semester | Language |
| Optional: Distributed systems | 9 | 1 | Fall | EN |
| Optional: Testing of computer systems | 9 | 1 | Fall | EN |
| Optional: Data transmission, coding & compression | 9 | 1 | Fall | EN |
| Optional: Smart sensors and sensor networks | 9 | 1 | Fall | EN |
| Optional: Component based software engineering | 9 | 1 | Fall | EN |
| Optional: Advanced digital signal processing | 9 | 1 | Fall | EN |
| Research topics in information technology | 3 | 1 | Fall | EN |
| Optional: Advanced databases | 9 | 1 | Spring | EN |
| Optional: Development of complex distributed application | 5 9 | 1 | Spring | EN |
| Optional: Information technology project management | 9 | 1 | Spring | EN |
| Optional: Integrated information systems | 9 | 1 | Spring | EN |
| Optional: Real time system design | 9 | 1 | Spring | EN |
| Optional: Cellular data networks | 9 | 1 | Spring | EN |
| Introduction to research | 3 | 1 | Spring | EN |
| Optional: Applied mathematics | 9 | 2 | Fall | EN |
| Optional: Emergent and collective intelligence systems | 9 | 2 | Fall | EN |
| Optional: Advanced web programming | 9 | 2 | Fall | EN |
| Optional: Advanced software technologies | 9 | 2 | Fall | EN |
| Research activity and internship | 15 | 2 | Spring | EN |
| Master thesis development and defense | 15 | 2 | Spring | EN |
| | | | | |
| Software Engineering (Master) | | | | |
| <u>Software Engineering (Master)</u> Subject | ECTS | Year of study | Semester | Language |
| | ECTS 9 | Year of study 1 | Semester Fall | Language EN |
| Subject | | • | | |
| Subject Optional: Advanced algorithms | 9 | 1 | Fall | EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis | 9 9 | 1 1 | Fall Fall | EN EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering | 9 9 9 | 1 1 1 | Fall Fall Fall | EN EN EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design | 9 9 9 9 | 1 1 1 | Fall Fall Fall Fall | EN EN EN EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition | 9 9 9 9 | 1 1 1 | Fall Fall Fall Fall Fall | EN EN EN EN EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems | 9 9 9 9 9 | 1 1 1 | Fall Fall Fall Fall Fall | EN EN EN EN EN EN EN EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering | 9 9 9 9 9 9 3 | 1 1 1 | Fall Fall Fall Fall Fall Fall | EN EN EN EN EN EN EN EN EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases | 9 9 9 9 9 9 3 | 1 1 1 | Fall Fall Fall Fall Fall Fall Spring | EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application | 9 9 9 9 9 9 3 9 | 1 1 1 | Fall Fall Fall Fall Fall Fall Spring Spring | EN |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management | 9 9 9 9 9 3 9 | 1 1 1 | Fall Fall Fall Fall Fall Fall Spring Spring Spring | EN E |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management Optional: Heuristic methods | 9 9 9 9 9 9 3 9 9 9 | 1 1 1 | Fall Fall Fall Fall Fall Fall Spring Spring Spring Spring | EN E |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management Optional: Heuristic methods Introduction to research | 9 9 9 9 9 3 9 9 9 9 | 1 1 1 1 1 1 1 1 1 1 1 | Fall Fall Fall Fall Fall Fall Spring Spring Spring Spring Spring | EN E |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management Optional: Heuristic methods Introduction to research Optional: Advanced software technologies | 9 9 9 9 9 9 3 9 9 9 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Fall Fall Fall Fall Fall Fall Spring Spring Spring Spring Spring Fall Fall | EN E |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management Optional: Heuristic methods Introduction to research Optional: Advanced software technologies Optional: Advanced web programming | 9 9 9 9 9 3 9 9 9 | 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 | Fall Fall Fall Fall Fall Fall Spring Spring Spring Spring Fall Fall Fall Fall | EN E |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management Optional: Heuristic methods Introduction to research Optional: Advanced software technologies Optional: Advanced web programming Optional: Neural networks | 9 9 9 9 9 9 3 9 9 9 9 | 1 1 1 1 1 1 1 1 1 1 1 1 2 2 | Fall Fall Fall Fall Fall Fall Spring Spring Spring Spring Fall Fall Fall Fall Fall | EN E |
| Subject Optional: Advanced algorithms Optional: Programming language design and analysis Optional: Component based software engineering Optional: Compiler design Optional: Pattern recognition Optional: Graphics processing systems Research topics in software engineering Optional: Advanced databases Optional: Development of complex distributed application Optional: Information technology project management Optional: Heuristic methods Introduction to research Optional: Advanced software technologies Optional: Advanced web programming Optional: Neural networks Optional: Parallel algorithms | 9 9 9 9 9 3 9 9 9 3 | 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 | Fall Fall Fall Fall Fall Fall Spring Spring Spring Spring Fall Fall Fall Fall Fall | EN E |

| Computers and Information Technology (Bachelor) | | | | |
|---|------|---------------|----------|----------|
| Subject | ECTS | Year of study | Semester | Language |
| Mathematical analysis | 5 | 1 | Fall | EN |
| Algebra and geometry | 4 | 1 | Fall | EN |
| Electrical engineering fundamentals | 4 | 1 | Fall | EN |
| Computer programming | 5 | 1 | Fall | EN |
| Logic and discrete structures | 5 | 1 | Fall | EN |
| Foreign languages | 2 | 1 | Fall | EN |
| Sports | 1 | 1 | Fall | EN |
| Culture and civilization | 2 | 1 | Fall | EN |
| Applied activities (45 hours) | 2 | 1 | Fall | EN |
| Computer assisted mathematics | 4 | 1 | Spring | EN |
| Special mathematics (Probabilistics and statistics) | 4 | 1 | Spring | EN |
| Physics | 4 | 1 | Spring | EN |
| Electronic devices | 4 | 1 | Spring | EN |
| Programming techniques | 4 | 1 | Spring | EN |
| Digital logic | 5 | 1 | Spring | EN |
| Foreign languages | 2 | 1 | Spring | EN |
| Sports | 1 | 1 | Spring | EN |
| Applied activities (45 hours) | 2 | 1 | Spring | EN |
| Mechanical systems modeling | 3 | 2 | Fall | EN |
| Data structures and algorithms | 5 | 2 | Fall | EN |
| Object-oriented programming | 4 | 2 | Fall | EN |
| Measurement principles, techniques and devices | 4 | 2 | Fall | EN |
| Computer architecture | 5 | 2 | Fall | EN |
| • | | 2 | Fall | EN |
| Digital circuits and signals Communication | 4 | | | |
| | 2 | 2 | Fall | EN |
| Sports Applied Activities (45 hours) | 1 | 2 | Fall | EN |
| Applied Activities (45 hours) | 2 | 2 | Fall | EN |
| Microeconomics | 3 | 2 | Spring | EN |
| Algorithm design and analysis | 4 | 2 | Spring | EN |
| Software engineering fundamentals | 5 | 2 | Spring | EN |
| System theory and automatization | 5 | 2 | Spring | EN |
| Computer organization | 5 | 2 | Spring | EN |
| Integrated circuits / Fundamental concepts of programming languages | 5 | 2 | Spring | EN |
| Sports | 1 | 2 | Spring | EN |
| Applied activities (45 hours) | 2 | 2 | Spring | EN |
| Computer networks | 4 | 3 | Fall | EN |
| Fundamentals of computer engineering | 5 | 3 | Fall | EN |
| Operating systems | 5 | 3 | Fall | EN |
| Designing digital micro-systems | 4 | 3 | Fall | EN |
| Management | 2 | 3 | Fall | EN |
| Optional: Large-scale integrated circuits | 4 | 3 | Fall | EN |
| Optional: Detailed design of software systems | 4 | 3 | Fall | EN |
| Applied activities (45 hours) | 2 | 3 | Fall | EN |
| Optional: Digital signal processing | 4 | 3 | Fall | EN |
| Optional: Quality in information technology | 4 | 3 | Fall | EN |
| Optional: Programming in assembly language | 4 | 3 | Fall | EN |
| Optional: Web programming | 4 | 3 | Fall | EN |
| | | | | |

| Marketing | 2 | 3 | Spring | EN |
|---|---|---|--------|----|
| Fundamentals of artificial intelligence | 4 | 3 | Spring | EN |
| Embedded systems | 5 | 3 | Spring | EN |
| Graphics (and human-computer interface) | 4 | 3 | Spring | EN |
| Databases | 5 | 3 | Spring | EN |
| Optional: Microprocessor systems | 4 | 3 | Spring | EN |
| Optional: Computer engineering | 4 | 3 | Spring | EN |
| Optional: Complexity and computability | 4 | 3 | Spring | EN |
| Optional: The design and architecture of complex software systems | 4 | 3 | Spring | EN |
| Optional: Input-output systems | 4 | 3 | Spring | EN |
| Optional: Semiconductor memories | 4 | 3 | Spring | EN |
| Optional: Programming computer networks | 4 | 3 | Spring | EN |
| Optional: Data exploring | 4 | 3 | Spring | EN |
| Applied activities (45 hours) | 2 | 3 | Spring | EN |
| Preparation of bachelor's degree thesis | 5 | 4 | Spring | EN |

2.4.3. FACULTY OF CIVIL ENGINEERING

| Advanced design of steel and composite structures (Maste | <u>r)</u> | | | |
|--|-----------|---------------|----------|----------|
| Subject | ECTS | Year of study | Semester | Language |
| Theory of elasticity and plasticity | 8 | 1 | Fall | EN |
| Advanced finite element analysis | 7 | 1 | Fall | EN |
| Research and design assisted by testing | 7 | 1 | Fall | EN |
| Life cycle analysis for building structures | 8 | 1 | Fall | EN |
| Robustness of structures under extreme actions | 7 | 1 | Spring | EN |
| Performance based seismic design | 8 | 1 | Spring | EN |
| Advanced design of composite steel-concrete structures | 8 | 1 | Spring | EN |
| Introduction to fire design | 7 | 1 | Spring | EN |
| Optional: Cold-formed steel structures | 8 | 2 | Fall | EN |
| Optional: Steel and composite steel-concrete bridges | 8 | 2 | Fall | EN |
| Optional: High-rise steel buildings | 8 | 2 | Fall | EN |
| Optional: Structures for buildings with large spans | 8 | 2 | Fall | EN |
| Optional: Aluminum structures | 7 | 2 | Fall | EN |
| Optional: Metallic shell structures | 7 | 2 | Fall | EN |
| Advanced Fire Design | 7 | 2 | Fall | EN |
| Research Activity - 7 weeks | 15 | 2 | Spring | EN |
| Development and Defense of Master Thesis | 15 | 2 | Spring | EN |

Civil engineering (Bachelor) Subject Year of study ECTS Language Semester Mathematics1 1 Fall EN, DE 4 Mathematics2 4 1 EN, DE Fall EN, DE Surveying (Geodesy) 4 1 Fall General chemistry 5 1 Fall EN, DE Introduction to computer programming EN, DE 4 1 Fall Culture and civilization 2 1 Fall EN, DE Second language1 EN, DE 2 1 Fall EN, DE 1 Sport1 1 Fall Experimental data processing 2 1 Fall EN, DE

| Practical training (45 hours) | 2 | 1 | Fall | EN, DE |
|--|---|--------|----------------|--------|
| Mathematics3 | 4 | 1 | Spring | EN, DE |
| Mathematics4 | 4 | 1 | Spring | EN, DE |
| Material science1 | 4 | 1 | Spring | EN, DE |
| Mechanics | 4 | 1 | Spring | EN, DE |
| Physics | 5 | 1 | Spring | EN, DE |
| Applied computer programming | 4 | 1 | Spring | EN, DE |
| Second language2 | 2 | 1 | Spring | EN, DE |
| • • | 1 | | , , | |
| Sport2 Practical training (45 hours) | 2 | 1 1 | Spring | EN, DE |
| Practical training (45 hours) Mechanics of materials1 | 5 | 2 | Spring Fall | EN, DE |
| |) | Z | FdII | EN, DE |
| Electrical engineering fundamentals and introduction in thermodynamics | 3 | 2 | Fall | EN, DE |
| Fluid mechanics and machines | 4 | 2 | Fall | EN, DE |
| Material science II (building materials) | 4 | 2 | Fall | EN, DE |
| Engineering geology | 3 | 2 | Fall | EN, DE |
| Engineering graphics | 4 | 2 | Fall | EN, DE |
| Architecture for engineers | 2 | 2 | Fall | EN, DE |
| Second language3 | 2 | 2 | Fall | EN, DE |
| Sport3 | 1 | 2 | Fall | EN, DE |
| Practical training (45 hours) | 2 | 2 | Fall | EN, DE |
| Mechanics of materials2 | 5 | 2 | Spring | EN, DE |
| Microeconomics | 4 | 2 | Spring | EN, DE |
| Basis of structural design | 4 | 2 | Spring | EN, DE |
| Introduction to environmental engineering | 2 | 2 | Spring | EN, DE |
| Engineering geology building physics | 4 | 2 | Spring | EN, DE |
| Structural analysis 1 | 4 | 2 | Spring | EN, DE |
| Highway and traffic engineering | 2 | 2 | Spring | EN, DE |
| Engineering ethics and communication | 2 | 2 | Spring | EN, DE |
| Sport4 | 1 | 2 | Spring | EN, DE |
| Practical training (45 hours) | 2 | 2 | Spring | EN, DE |
| Structural analysis 2 | 5 | 3 | Fall | EN, DE |
| Concrete 1 | 5 | 3 | Fall | EN, DE |
| Metal constructions 1 | 5 | 3 | Fall | EN, DE |
| Foundations | 5 | 3 | Fall | EN, DE |
| Optional: Timber structures | 3 | 3 | Fall | EN, DE |
| Optional: Timber bridges | 3 | 3 | Fall | EN, DE |
| Soil and rock mechanics | 3 | 3 | Fall | EN, DE |
| Marketing and building legislation | 2 | 3 | Fall | EN, DE |
| Practical training (45 hours) | 2 | 3 | Fall | EN, DE |
| | | | | |

| Dynamics and earthquake engineering | 4 | 3 | Spring | EN, DE |
|---|------|---------------|------------------|------------------|
| Concrete 2 | 5 | 3 | Spring | EN, DE |
| Metal constructions 2 | 4 | 3 | Spring | EN, DE |
| Buildings 1 | 4 | 3 | Spring | EN, DE |
| Technology 1 | 4 | 3 | Spring | EN, DE |
| Introduction to FEA | 3 | 3 | Spring | EN, DE |
| Management | 2 | 3 | Spring | EN, DE |
| Building services | 2 | 3 | Spring | EN, DE |
| Practical training(45 hours) | 2 | 3 | Spring | EN, DE |
| Reinforced and prestressed concrete structures | 5 | 4 | Fall | EN, DE |
| Metal structures | 4 | 4 | Fall | EN, DE |
| Buildings II | 4 | 4 | Fall | EN, DE |
| Management of constructions and building sites | 5 | 4 | Fall | EN, DE |
| Building services | 2 | 4 | Fall | EN, DE |
| Optional: Special R.C. structures | 5 | 4 | Fall | EN, DE |
| Optional: Special metal structures | 5 | 4 | Fall | EN, DE |
| Optional: High performance concrete and composites | 5 | 4 | Fall | EN, DE |
| Optional: Structural glass | 5 | 4 | Fall | EN, DE |
| Optional: Bridges | 3 | 4 | Spring | EN, DE |
| Optional: Masonry and local materials structures | 3 | 4 | Spring | EN, DE |
| Optional: Materials & tech. for sustainable buildings | 3 | 4 | Spring | EN, DE |
| Optional: Technology for steel and composite structures | 3 | 4 | Spring | EN, DE |
| Optional: Composite steel concrete structures | 4 | 4 | Spring | EN, DE |
| Optional: Steel concrete composite bridges | 4 | 4 | Spring | EN, DE |
| Technology 2 | 5 | | Spring | EN, DE |
| Optional: Special techniques in foundation engineering | 3 | 4 | Spring | EN, DE EN, DE |
| Optional: Sanitary and sewage | 3 | 4 | | EN, DE |
| Diploma work | 5 | 4 | Spring Spring | EN, DE |
| Defense of diploma work | 10 | 4 4 | Spring | EN, DE |
| belefise of diplottia work | 10 | 4 | Spring | LIN, DL |
| <u>Civil engineering</u> | FCTC | V 6 . 1 | • | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree project in civil, | _ | | | 511 50 05 |
| industrial and agricultural constructions | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in railways, roads | _ | | | 5W 50 05 |
| and bridges engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in hydrotechnical | _ | | | |
| developments and constructions | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in land | | | | |
| reclamation and improvement. Rural development | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in sanitary | | | | |
| engineering and environmental protection | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in land | _ | | | |
| measurement and cadastral survey | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in cadastre and | 4- | _ | | |
| the evaluationof immovables | 15 | 2 | Spring | EN,FR,DE |

| Preparation of master's degree project in sustainabiliy: | 4.5 | 2 | . | EN ED DE |
|--|-------------------------------------|--|---|--|
| energetic audit and fire protection in buildings | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in transport | 15 | 2 | . | EN ED DE |
| infrastructure | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in environmental | 15 | 2 | Consideration | EN ED DE |
| protection engineering | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in engineering | 15 | 2 | Corina | EN ED DE |
| and sustainable rural development Preparation of master's degree project in optimization of | 15 | 2 | Spring | EN,FR,DE |
| sanitary eng. & env. protection systems exploitation | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in optimising and | 13 | 2 | opining | LIV,I N,DL |
| modernizing of building services systems | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in optimization of | 13 | 2 | Spring | LIV,I IV,DL |
| hydrotechnical systems | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in rehabilitation of | 15 | 2 | Spring | LIV,I IV,DL |
| buildings | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in foundation | 13 | 2 | Spring | בוויוו וויטב |
| systems for special constructions | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in Structures | 15 | 2 | Spring | EN,FR,DE |
| ··· | | | | , |
| Sustainable Constructions under Natural Hazards and Cata | strophic Ever | nts (Erasmus Mundus Ma | <u>ister)</u> | |
| Subject | ECTS | Year of study | Semester | Language |
| Design of sustainable constructions | 6 | 1 | Fall | EN |
| Conceptual design of buildings | 6 | 1 | Fall | EN |
| Conceptual design of bridges | 6 | 1 | Fall | EN |
| Local culture and language | 2 | 1 | Fall | EN |
| Optional 1: Advanced design of glass structures | 5 | 1 | Fall | EN |
| Optional 2: Advanced design of timber structures | 5 | 1 | Fall | EN |
| Optional 3: Rehabilitation and maintenance of structures | 5 | 1 | Fall | EN |
| Advanced design of steel end composite structures | 6 | 1 | Chrina | EN |
| | | 1 | Spring | |
| Design for seismic and climate changes | 6 | 1 | Spring | EN |
| Design for fire and robustness | 6 6 | 1 1 | Spring Spring | EN |
| Design for fire and robustness Business economics and entrepreneurship | 6 2 | 1 | Spring Spring Spring | EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems | 6 2 5 | 1 1 1 | Spring Spring Spring Spring | EN En En |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures | 6 2 5 5 | 1 1 1 1 | Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures | 6 2 5 5 5 | 1 1 1 1 1 | Spring Spring Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures | 6 2 5 5 | 1 1 1 1 | Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis | 6 2 5 5 5 | 1 1 1 1 1 | Spring Spring Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures | 6 2 5 5 5 | 1 1 1 1 1 | Spring Spring Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES | 6 2 5 5 5 | 1 1 1 1 1 | Spring Spring Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences | 6 2 5 5 5 5 30 | 1 1 1 1 1 1 2 | Spring Spring Spring Spring Spring Spring Fall | EN EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences Subject | 6 2 5 5 5 | 1 1 1 1 1 | Spring Spring Spring Spring Spring Spring Spring | EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences Subject Preparation of bachelor's degree thesis in communication | 6 2 5 5 5 30 | 1 1 1 1 1 1 2 Year of study | Spring Spring Spring Spring Spring Spring Fall | EN EN EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences Subject Preparation of bachelor's degree thesis in communication and public relations | 6 2 5 5 5 5 30 | 1 1 1 1 1 1 2 | Spring Spring Spring Spring Spring Spring Fall | EN EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences Subject Preparation of bachelor's degree thesis in communication and public relations Preparation of bachelor's degree thesis in translation and | 6 2 5 5 5 30 ECTS | 1 1 1 1 1 1 2 Year of study | Spring Spring Spring Spring Spring Spring Fall Semester Spring | EN EN EN EN EN EN Language |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences Subject Preparation of bachelor's degree thesis in communication and public relations Preparation of bachelor's degree thesis in translation and interpreting | 6 2 5 5 5 30 | 1 1 1 1 1 1 2 Year of study | Spring Spring Spring Spring Spring Spring Fall | EN EN EN EN EN EN |
| Design for fire and robustness Business economics and entrepreneurship Optional 4: Design for renewable energy systems Optional 5: Advanced design of concrete structures Optional 6: Design of aluminum & stainless steel structures Preparation and defense of degree thesis 2.4.4. FACULTY OF COMMUNICATION SCIENCES Communication Sciences Subject Preparation of bachelor's degree thesis in communication and public relations Preparation of bachelor's degree thesis in translation and | 6 2 5 5 5 30 ECTS | 1 1 1 1 1 1 2 Year of study | Spring Spring Spring Spring Spring Spring Fall Semester Spring | EN EN EN EN EN EN Language |

2.4.5. FACULTY OF ELECTRICAL AND POWER ENGINEERING

| 2.113. THEOLIT OF ELECTRICAL AND FOREIGN | LLIIIII | | | |
|---|----------|---------------|----------|----------|
| Electrical and Power Engineering | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree project in electrotechnics | | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in power systems | | | | , |
| engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in power systems | | | 1 3 | , , |
| command and control | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in elecrotechnics | | | 1 3 | , , |
| and power electronics | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in renewable | | | . , | |
| energy (solar energy) | 15 | 2 | Spring | EN,FR,DE |
| | | | | |
| 2.4.6. FACULTY OF ELECTRONICS AND TELECOMMU | NICATION | NS | | |
| Communication Networks Engineering (Master) | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Antennas and wave propagation | 8 | 1 | Fall | EN |
| Advanced topics in signal processing | 7 | 1 | Fall | EN |
| Selected topics in communication engineering | 8 | 1 | Fall | EN |
| Optional: Modern programming techniques | 7 | 1 | Fall | EN |
| Optional: PCBA design and manufacturing | 7 | 1 | Fall | EN |
| Optional: Mathematical morphology | 7 | 1 | Fall | EN |
| Pattern recognition | 8 | 1 | Spring | EN |
| Networks modeling | 7 | 1 | Spring | EN |
| Video networks | 8 | 1 | Spring | EN |
| Optional: Network planning | 7 | 1 | Spring | EN |
| Optional: Computer networks administration | 7 | 1 | Spring | EN |
| Mobile communication networks | 8 | 2 | Fall | EN |
| Optical communication systems and networks | 8 | 2 | Fall | EN |
| Optional: Resource management in wireless networks | 7 | 2 | Fall | EN |
| Optional: Broadband communication networks | 7 | 2 | Fall | EN |
| Optional: Advanced multimedia technologies | 7 | 2 | Fall | EN |
| Optional: Spectral analysis and estimation | 7 | 2 | Fall | EN |
| Practical training/research | 15 | 2 | Spring | EN |
| Master thesis elaboration | 15 | 2 | Spring | EN |
| Electronics and Telecommunications (Bachelor) | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Mathematics I | 4 | 1 | Fall | EN |
| Mathematics II | 4 | 1 | Fall | EN |
| Mechanics | 4 | 1 | Fall | EN |
| Electrical circuits | 5 | 1 | Fall | EN |
| Introduction to computer programming | 4 | 1 | Fall | EN |
| Culture and civilization | 2 | 1 | Fall | EN |
| Second language | 2 | 1 | Fall | EN |
| Experimental data processing | 2 | 1 | Fall | EN |
| Sport | 1 | 1 | Fall | EN |
| Practical training (45 hours) | 2 | 1 | Fall | EN |
| • | | | | |

| Mathematics III | 4 | 1 | Carina | EN |
|---|---|---|------------------|----|
| Mathematics IV | | | Spring | |
| | 4 | 1 | Spring Spring | EN |
| Materials science | 4 | 1 | Spring | EN |
| Physics | 5 | 1 | Spring | EN |
| Electronic devices | 4 | 1 | Spring | EN |
| Applied computer programming | 4 | 1 | Spring | EN |
| Second language | 2 | 1 | Spring | EN |
| Sport | 1 | 1 | Spring | EN |
| Practical training (45 hours) | 2 | 1 | Spring | EN |
| Electronic circuits | 5 | 2 | Fall | EN |
| Engineering electromagnetics | 4 | 2 | Fall | EN |
| Signals and systems | 4 | 2 | Fall | EN |
| Digital integrated circuits | 4 | 2 | Fall | EN |
| Computer aided design | 4 | 2 | Fall | EN |
| Electrical and electronic measurements | 4 | 2 | Fall | EN |
| Second language | 2 | 2 | Fall | EN |
| Sport | 1 | 2 | Fall | EN |
| Practical training (45 hours) | 2 | 2 | Fall | EN |
| Analog integrated circuits | 4 | 2 | | EN |
| Microeconomics | | | Spring | |
| | 3 | 2 | Spring | EN |
| Computer networks architecture | 4 | 2 | Spring | EN |
| Object oriented programming | 4 | 2 | Spring | EN |
| Signal processing | 5 | 2 | Spring | EN |
| Microprocessors and microcontrollers | 5 | 2 | Spring | EN |
| Electronic circuits project | 2 | 2 | Spring | EN |
| Sport | 1 | 2 | Spring | EN |
| Practical training (45 hours) | 2 | 2 | Spring | EN |
| Management and marketing | 4 | 3 | Fall | EN |
| Electronic instrumentation | 4 | 3 | Fall | EN |
| Radio communications | 4 | 3 | Fall | EN |
| Virtual instrumentation | 4 | 3 | Fall | EN |
| Information theory and coding | 4 | 3 | Fall | EN |
| Data communications | 4 | 3 | Fall | EN |
| High frequency techniques | 4 | 3 | Fall | EN |
| Practical training (45 hours) | 2 | 3 | Fall | EN |
| Optional: Electromagnetic compatibility | 4 | 3 | Spring | EN |
| Optional: Digital switching systems | 4 | 3 | Spring | EN |
| Programmable logic systems | 5 | 3 | Spring | EN |
| Power electronics | 4 | | | |
| | | 3 | Spring | EN |
| Embedded systems | 4 | 3 | Spring | EN |
| Digital telephony | 5 | 3 | Spring | EN |
| Audio and video systems | 4 | 3 | Spring | EN |
| Engineering ethics and communication | 2 | 3 | Spring | EN |
| Practical training (45 hours) | 2 | 3 | Spring | EN |
| Electronic equipment testing | 5 | 4 | Fall | EN |
| Software development | 5 | 4 | Fall | EN |
| Modeling and simulation | 5 | 4 | Fall | EN |
| | | | | |

| Optional: VHDL | 4 | 4 | Fall | EN |
|---|------|---------------|-------------------|----------|
| Optional: Digital signal processors | 4 | 4 | Fall | EN |
| Microelectronics | 5 | 4 | Fall | EN |
| Integrated digital networks | 4 | 4 | Fall | EN |
| Project (for an optional subject) | 2 | 4 | Fall | EN |
| Optional: Digital radio communications | 3 | 4 | Spring | EN |
| Optional: Optical communications | 3 | 4 | Spring | EN |
| Optional: Image processing | 3 | 4 | Spring | EN |
| Optional: Biomedical electronics | 3 | 4 | Spring | EN |
| Electronic packaging | 3 | 4 | Spring | EN |
| Wireless communications | 3 | 4 | Spring | EN |
| Software project | 3 | 4 | Spring | EN |
| Diploma work | 5 | 4 | Spring | EN |
| Defense of diploma work | 10 | 4 | Spring | EN |
| | | | | |
| Electronics and Telecommunications | | | | |
| Subject | ECTS | Year of study | Semester Language | |
| Preparation of bachelor's degree project in applied electronics | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in multimedia technologies | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in biomedical electronics | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in intelligent electronic systems | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in telecommunications networks engineering | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in advanced electronics techniques | 15 | 2 | Spring | EN,FR,DE |
| | | | | |
| <u>Traitement du signal (Master)</u> | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Les applications des réseaux de neurones | 7 | 1 | Fall | FR |
| Techniques adaptatives de télécommunications | 7 | 1 | Fall | FR |
| Traitement statistique du signal | 7 | 1 | Spring | FR |
| Représentations temps-fréquence | 8 | 1 | Spring | FR |
| Traitement d'images | 8 | 1 | Spring | FR |
| Techniques d'estimation aveugle | 7 | 2 | Fall | FR |
| Morphologie mathématique | 8 | 2 | Fall | FR |
| Technologies de diversification | 8 | 2 | Fall | FR |
| Option: Fondements de traitement du signal | 8 | 1 | Fall | FR |
| Option: Signaux&systèmes de comm. numériques | 8 | 1 | Fall | FR |
| Option: Processeurs et systèmes d'acquisition | 8 | 1 | Fall | FR |
| Option: Techniques modernes de programmation | 8 | 1 | Fall | FR |
| Option: Modélisation statistique et stochastique | 8 | 1 | Fall | FR |
| Option: Circuits spécifiques pour les communications avec les mobiles | 7 | 1 | Spring | FR |
| | | | | |

| Option: Simulation de réseaux de communications | 7 | 1 | Spring | FR |
|---|----|---|--------|----|
| Option: Administration de réseaux informatiques | 7 | 1 | Spring | FR |
| Option: Traitement des signaux biomédicaux | 7 | 1 | Spring | FR |
| Stage | 15 | 2 | Spring | FR |
| Option:Communications sur des canaux variables en temps | 7 | 2 | Fall | FR |
| Option: Services numériques électroniques | 7 | 2 | Fall | FR |
| Option: Réseaux à large bande | 7 | 2 | Fall | FR |
| Option: Algorithmes et techniques de modélisation | 7 | 2 | Fall | FR |
| Dissertation | 15 | 2 | Spring | FR |

2.4.7. FACULTY OF ENGINEERING IN HUNEDOARA

| Engineerin | q | <u>programmes</u> | |
|-------------------|---|-------------------|--|
| | - | | |
| | | | |

| Subject | ECTS | Year of study | Semester | Language |
|---|------|---------------|----------|----------|
| Preparation of bachelor's degree project in electromechanics | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in materials process engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in road vehicles | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in economic engineeering in the field of mechanics | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in economic engineering in the chemical and material industries | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in industrial informatics | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in engineering and management of sustainable development in the materials industry | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in engineering and management of mechanical systems | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in advanced materials and technologies for automotive industry | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in advanced systems for industrial use of electricity | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in computer techniques in electrical engineering | 15 | 2 | Spring | EN,FR,DE |
| | | | | |

2.4.8. FACULTY OF INDUSTRIAL CHEMISTRY AND ENVIRONMENTAL ENGINEERING

Industrial chemistry and environmental engineering

| Subject | ECTS | Year of study | Semester Langua | age |
|--|------|---------------|-----------------|----------|
| Preparation of bachelor's degree project in food chemistry and biochemical technologies | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in inorganic substances engineering and environmental protection | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in chemistry and eng. of organic substances, oil chemistry & charcoal chemistry | 5 | 4 | Spring | EN,FR,DE |

| Preparation of bachelor's degree in environmental eng. and protection in industry | 5 | 4 | Spring | EN,FR,DE |
|--|-----------|---------------|----------|----------|
| Preparation of bachelor's degree in biotechnical and ecological systems engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in controlling and advising of foods | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in environmental engineering and management in industry | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in micro and nanomaterials | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in clean process technologies | 15 | 2 | Spring | EN,FR,DE |
| 2.4.9. FACULTY OF MANAGEMENT IN PRODUCTION | AND TRANS | SPORTATION | | |
| Engineering and management | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree thesis in industrial economic engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree thesis in economic engineering in construction | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree thesis in economic engineering in the chemical and material industries | s 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree thesis in economic eng. in the electrical, electronics and power fields | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree thesis in competitivene engineering and management | ess 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree thesis in logistics system engineeing and management | ms 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree thesis in business administration | 15 | 2 | Spring | EN,FR,DE |
| Administrative sciences | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree thesis in public | LCIS | rear or study | Jemester | Language |
| administration | 5 | 3 | Spring | EN,FR,DE |
| 2.4.10. FACULTY OF MECHANICAL ENGINEERING | | | | |
| Advanced materials and technologies (Master) | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Nanomaterials | 8 | 1 | Fall | EN |
| Numerical distribution of continuous fields in advance materials | d 4 | 1 | Fall | EN |
| Design of fiber reinforced materials | 5 | 1 | Spring | EN |

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Fall

Fall

Optional: Simulation of mass and heat transfer

Optional: Particulate and cellular materials

EN

EN

| <u>Automotive engineering</u> Subject | ECTS | Year of study | Semester | Languag |
|---|-------|---------------|------------|--------------|
| Preparation of bachelor's degree project in automotive engineering (road vehicles) | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in propulsion system's engineering for motor vehicles | 15 | 2 | Spring | EN,FR,DE |
| Energy and ecology for thermal and transport systems (Ma | ctar) | | . , | |
| Subject | ECTS | Year of study | Semester | Languag |
| Advanced thermodynamic cycles | 8 | 1 | Fall | EN |
| Design of thermal systems | 8 | 1 | Fall | EN |
| Combustion theory | 6 | 1 | Fall | EN |
| Genesis, control and dispersion of pollutants | 8 | 1 | Spring | EN |
| Thermal energy conversion systems | 8 | 1 | Spring | EN |
| Fuels and injection equipments | 6 | 1 | Spring | EN |
| Project management | 8 | 2 | Fall | EN |
| Management of bio-energy systems | 8 | 2 | Fall | EN |
| Preparation of master's degree project | 15 | 2 | Spring | EN |
| | | | | |
| Ergoengineering (Master) | | | | |
| Subject | ECTS | Year of study | Semester | Languag |
| Advanced ergonomics | 8 | 1 | Spring | EN |
| Optional: Advanced materials | 6 | 1 | Spring | EN |
| Human centered design | 8 | 1 | Spring | EN |
| Occupational biomechanics | 8 | 1 | Fall | EN |
| Modeling and simulation of technical & biological systems | | 2 | Fall | EN |
| Occupational therapy | 8 | 2 | Fall | EN |
| Preparation of master's degree project | 15 | 2 | Spring | EN |
| Industrial engineering | | | | |
| Subject | ECTS | Year of study | Semester | Languag |
| Preparation of bachelor's degree project in manufacturing engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in polymeric and composite products engineering | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in integrated engineering | 15 | 2 | Spring | EN,FR,DI |
| Preparation of master's degree project in productive welding processes in protective gasses | 15 | 2 | Spring | EN,FR,DI |
| Materials engineering | | | | |
| Subject | ECTS | Year of study | Semester | Languag |
| Preparation of bachelor's degree project in materials science | 5 | 4 | Spring | EN,FR,DI |
| Preparation of master's degree project in advanced materials and technologies | 15 | 2 | Spring | EN,FR,DI |
| materials and technologies | | _ | Spring | LIN, I II, D |

| Mechanical Engineering | | | | |
|---|--------|---------------|----------|----------|
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree project in mechanical engineering | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in machines and plants for agriculture & food industry | 5 | 4 | Spring | EN,FR,DE |
| Preparation of bachelor's degree project in hydraulic and pneumatic machines and systems | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in hydrodynamic machines and hydro-mechanical systems | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in engineering relationships of work, health and work security | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in the engineering of renewable energy resources | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in advanced mechanical engineering | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in quality management for technological processes | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in modern railway systems | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in integrated systems for agri-food production | 15 | 2 | Spring | EN,FR,DE |
| Mechatronics and Robotics | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree project in mechatronics and robotics | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in artificially intelligent robotic systems | 15 | 4 | Spring | EN,FR,DE |
| Medical engineering | | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Preparation of bachelor's degree project in medical eng. | 5 | 4 | Spring | EN,FR,DE |
| Preparation of master's degree project in statistical methods and techniques in health care and clinical research | 15 | 2 | Spring | EN,FR,DE |
| Preparation of master's degree project in implants, prostheses and biomechanical evaluation | 15 | 2 | Spring | EN,FR,DE |
| Propulsion Systems engineering for motor vehicles (Maste | ur) | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Motor vehicles engines I | 8 | 1 | Fall | EN |
| Motor vehicles engines II | 8 | 1 | Spring | EN |
| Legislation and homologation of motor's vehicles | 7 | 1 | Fall | EN |
| Fuels and injection equipments | , 7 | 1 | Spring | EN |
| Powertrain optimization through numerical modelation | 8 | 1 | Fall | EN |
| Urban, periurban and regional public transport | 8 | 1 | Spring | EN |
| Optional: Engine and powertrain diagnosis | 7 | 1 | Spring | EN |
| Unconventional propulsion systems | 8 | 2 | Fall | EN |
| Vehicles dynamics modelation | 7 | 2 | Fall | EN |
| | | | | |

| Optional: Engine cooling systems | 7 | 1 | Fall | EN |
|---|---------------------------------------|--|--|----------------------------|
| Optional: Dynamics and exploration of road accidents | 8 | 2 | Fall | EN |
| Optional: Acquisition and processing experimental data | 7 | 2 | Fall | EN |
| | | | | |
| Quality engineering in mechatronics and robotics (Master | 1 | | | |
| Subject | ECTS | Year of study | Semester | Language |
| Computer aided quality analysis | 8 | 1 | Spring | EN |
| Reliability of mechatronic systems | 7 | 1 | Spring | EN |
| 3D Modelling | 7 | 1 | Fall | EN |
| Optional: Statistical process control | 5 | 1 | Fall | EN |
| Optional: Shape integration and mechatronic systems configuration | 8 | 1 | Spring | EN |
| Optional: Programmable logic controllers | 8 | 2 | Fall | EN |
| Human machine interface | 7 | 2 | Fall | EN |
| Preparation of master's degree project | 15 | 2 | Spring | EN |
| | | | | |
| | | | | |
| Robotic systems with artificial intelligence (Master) | | | | |
| Robotic systems with artificial intelligence (Master) Subject | ECTS | Year of study | Semester | Language |
| | ECTS 8 | Year of study 1 | Semester Fall | Language EN |
| Subject | | * | | |
| Subject 3D Modelling | 8 | 1 | Fall | EN |
| Subject 3D Modelling Structural analysis in robotics | 8 | 1 | Fall Spring | EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) | 8 8 8 | 1 1 1 | Fall Spring Spring | EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics | 8 8 8 7 | 1 1 1 1 | Fall Spring Spring Fall | EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics Optional: Artificial intelligence for robotics | 8 8 8 7 7 | 1 1 1 1 | Fall Spring Spring Fall Spring | EN EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics Optional: Artificial intelligence for robotics Optional: Human machine interface Preparation of master's degree project in robotic | 8 8 8 7 7 7 | 1 1 1 1 1 2 | Fall Spring Spring Fall Spring Fall | EN EN EN EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics Optional: Artificial intelligence for robotics Optional: Human machine interface Preparation of master's degree project in robotic systems with artificial intelligence Transportation and traffic engineering Subject | 8 8 8 7 7 7 | 1 1 1 1 1 2 | Fall Spring Spring Fall Spring Fall | EN EN EN EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics Optional: Artificial intelligence for robotics Optional: Human machine interface Preparation of master's degree project in robotic systems with artificial intelligence Transportation and traffic engineering Subject Preparation of bachelor's degree project in transport | 8 8 8 7 7 7 7 15 | 1 1 1 1 1 2 2 Year of study | Fall Spring Spring Fall Spring Fall Spring | EN EN EN EN EN EN EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics Optional: Artificial intelligence for robotics Optional: Human machine interface Preparation of master's degree project in robotic systems with artificial intelligence Transportation and traffic engineering Subject | 8 8 8 7 7 7 7 | 1 1 1 1 1 2 | Fall Spring Spring Fall Spring Fall Spring | EN EN EN EN EN EN EN |
| Subject 3D Modelling Structural analysis in robotics CAD/CAM/CAE Systems (CATIA) Optional: Advanced mathematics in robotics Optional: Artificial intelligence for robotics Optional: Human machine interface Preparation of master's degree project in robotic systems with artificial intelligence Transportation and traffic engineering Subject Preparation of bachelor's degree project in transport and traffic engineering | 8 8 8 7 7 7 7 15 | 1 1 1 1 1 2 2 Year of study | Fall Spring Spring Fall Spring Fall Spring | EN EN EN EN EN EN EN EN EN |

CHAPTER 3. PRACTICAL INFORMATION FOR INTERNATIONAL EXCHANGE STUDENTS

3.1. ADMISSION PROCEDURES

All incoming exchange students should be nominated by their home university by:

a) Fall semester: 15th of June

b) Spring semester: 15th of December

The nomination letter will be sent to Prof. Dr. eng. Lia DOLGA, Head of the Department for International Relations, lia.dolga@upt.ro and must specify clearly within which programme the mobility will take place (Erasmus+, CEEPUS, bilateral agreement, double-degree programme, etc.).

Please note that although Politehnica University of Timişoara does not accept free-movers, we are open to signing new cooperation agreements. Proposals for new agreements and proposals to extend existing agreements to new study fields should be directed to Prof. Dr. eng. Lia DOLGA, Head of the Department for International Relations, lia.dolga@upt.ro.

Nominations which reach us after the deadlines will be processed if time allows.

The student application file consists of:

- a) Student application form
- b) Accommodation form (optional)
- c) Learning or training agreement proposal
- d) Buddy request form (optional)

The forms can be downloaded from: http://www.upt.ro/international

The application documents will be filled in and signed by each incoming student. The learning or training agreement has to be signed by the student and pre-approved by the home university. The application file will be submitted by e-mail to Mrs. Loredana NENESTEANU (loredana.nenesteanu@upt.ro).

The letter of acceptance and the approved learning/training agreement will be sent by e-mail to the candidate within 5 weeks after the application deadline.

No language certificate is required for admission, however for a successful stay we recommend a minimum level of B1 for the language in which the studies/internship will be carried out.

3.2. VISA, RESIDENCE PERMIT, REGISTRATION, HEALTH INSURANCE

Incoming exchange students should have a valid passport and/or identity card for the entire period of time to be spent in Timisoara:

- •Exchange students who are EU citizens do not need a visa to entry or study in Romania
- •Non-EU students must apply for a student visa at the Romanian Embassy in the country of their home university. The acceptance letter and learning/training agreement will support their visa application file. Upon arrival, all non-EU citizens have to register to the Immigration Office in Timisoara, Street Andrei Mocioni No. 8. The staff of the Department for International Relations will provide them with up-to-date information and the documents needed to obtain the residence permit.

We encourage all incoming exchange students to apply for the European Health Insurance Card or contract an equivalent health insurance policy before arrival. The European Health Insurance Card provides international students with the same health insurance rights and benefits as Romanian citizens. In the student campus a medical centre offer medical services to students, as well as referrals to specialists.

Politehnica University of Timisoara has a limited infrastructure to welcome students with physical disabilities. Please contact Prof. Dr. ing . Lia DOLGA (lia.dolga@upt.ro) to check if we can offer the conditions needed for a succesfull stay of a disable student. Each case has to be analysed individually.

All Incoming exchange students should inform Mrs. Loredana NENESTEANU(<u>loredana.nenesteanu@upt.ro</u>) at least one week in advance about their exact arrival date and time in Timişoara and make an appointment for registration. Registration is done at the Department for International Relations (UPT Rectorate Building: Piata Victoriei n.2, 3rd floor, office 319) from Monday to Thursday between 12 a.m. and 3 p.m.

For registration the student will present:

- his/her identity card or passport with the required visa for non-EU citizens
- two identity card photos (3 cmx4 cm) for the student card.
- any documents required by the home university to be signed at arrival at the host university (certificate of attendance, learning or training agreement, etc.)

3.3. ACCOMMODATION, CATERING AND COST OF LIVING

Accommodation in a student residence can be booked for all incoming international students. Incoming exchange students are hosted in student residences 11C, 8C or 14C (if necessary).

For the Residence no. 11C, the address is:

Complexul Studențesc

Street Aleea Studentilor, nr. 11C.

Contact person: Mrs. Ana CUCU, administrator

All the students are expected to arrive at the student residence from Monday till Friday, between 8 a.m. and 4 p.m. If the student will arrive later or during the weekend and he/she informed Mrs. Loredana NENESTEANU with at least a week in advance about his/her exact arrival day and time, the student will pick up the key and entry card from Student Residence 8C (Street Aleea Studentilor, nr. 8C). To sign de accommodation confract a copy of the identity card or passport and two small identity photos (3 cm X 4 cm) will be needed.

All student residences are situated within a walking distance from the UPT buildings (various faculty buildings, library, sports centers, student restaurants, etc) and the city centre. There are no reservation taxes to be paid in advance. The accommodation cost will be around 50 Euro/month.

We do not advise exchange students to come to Timişoara without booking their room at least for the first month in the student residence. Finding a furnished room on the private market for a short period of time can be difficult and expensive. Our office has no possibility to find private accommodation for the students.

The accommodation conditions are as follows:

- •2 students / room. It is not possible to pay double in order to have the room to yourself. You may request however to stay in the same room with someone you know. Male and female students are not placed in the same room unless they both request it and they are married or related.
- •Rooms have Internet connection, TV cable, fridge, furniture and bed linen. Students do not pay utilities.
- •Shared bathrooms, laundry rooms, reading rooms & kitchens. Irons, ironing boards, cooking ware and tableware will not be provided.
- •Student residences have security systems which include video surveillance and entry based on electronic cards.

The accommodation fee will be paid monthly using a credit or debit card. It is not possible to pay the accommodation using cash.

Please note that student residences have rules. Failure to comply with the rules can generate fines, and if the offenses are repeated the student can be evicted from the residence. We strongly recommend reading the accommodation contract carefully as an English version will be provided upon check in. It is also possible to read a sample accommodation contract on the Departament of International Relations webpage in the incoming students section.

Students who do not cook their own food can buy from the administrator of the residence meal tickets. Each ticket ensures one meal at a price of approx. 2 EUR. For 5 tickets, the student will pay approx. 8 EUR (1 free ticket for every 4 bought). These tickets can be used in the two student cafeterias of UPT. Most student residences have vending machines.

Life in Romania is not expensive, so an amount of 400 EUR should allow you a pleasant stay in Timisoara. This amount would cover your accommodation in the student residence, food, clothes, books, attending social and cultural events and some trips.

Sample prices (1 EUR is between 4.4 and 4.5 lei):

Food and drinks:

Sesame pretzel: 1 leu Single trip bus ticket: 2 lei (regular), 2.5 lei (expres)

0.5 I water: 2.5 lei Loaf of bread: 3-4 lei
1 I milk: 4 lei 1 kg apples: 3 lei
1 kg flour: 3 lei 1 pack spaghetti: 4 lei
1 kg rice: 6 lei 1 kg chicken breast: 17 lei

6-pack beer: 12-15 lei (in supermarkets) 1 beer bottle: starting from 5 lei (in clubs, restaurants, etc.)

Fast food menu: 10-15 lei Lunch daily offer in average restaurants: 10-15 lei

Large pizza: 20 lei Sushi lunch: 40 lei

Culture:

Opera ticket: 25 lei (with student discount)
Theater ticket: 10-15 lei (with student discount)

3-months subscription to the French Institute Mediatheque: 23 lei (with student discount) 6-months subscription to the German Cultural Center Library: 15 lei (with student discount)

Others:

Clothing, shoes, electronics and books have prices similar to other EU countries.

Medical services tend to be less expensive than in most other EU countries.

3.4. SPORTS, ACADEMIC AND SOCIAL LIFE





All incoming students have access free of charge to the sport facilities in the same conditions as the local students. There are two sports centers: Sport Centre 1 (fitness hall, football field, running track, covered mini-football fields) and Sport Centre 2 (indoor and outdoor swimming pools with sauna and fitness equipment; basketball and volleyball courts; football fields; bitumen and tartan tennis fields; multipurpose buildings).



The library offers access to the documentary resources and services needed for education and research. Access to the library will be offered only after registration.

The buddy programme coordinated by the Department for International Relations aims to facilitate the integration of international students in the local student life. The exchange students who submit the buddy request form will be put in contact with a local student to guide them around the city and campus, as well as to answer any questions they might have.

International exchange students are cordially invited to participate in the projects of the UPT student organisations: Board of European Students of Technology Timisoara; Faculty of Architecture Student Association; Faculty of Automation and Computer Science Student League; Faculty of Civil Engineering Student Organisation; Faculty of Electrical and Power **Engineering** Student League; Faculty of **Electronics** and Telecommunications Student League; Faculty of Engineering in Hunedoara Student League; Faculty of Industrial Chemistry and Environmental Engineering Student League; Faculty of Management in Production and Transportation Student League; Faculty of Mechanical Enginering Student League.



Central Library of Politehnica University of Timisoara



Welcome day for Erasmus students - February 2014



Winter trip with exchange students at the Semenic Mountain - February 2014



Cruise on the Danube for Erasmus Intensive Programme students



City tour for a group of incoming students



Intercultural evenings





Visit of the Iron Gate I Hydroelectric Power Station



Visit of the Sarmizegetusa Museum



One of the UPT's student restaurants



Lunch at the UPT's student restaurant



Student residence buildings



Student residence room

CHAPTER 4. PRACTICAL INFORMATION FOR INTERNATIONAL VISITING STAFF

4.1. INCOMING ERASMUS+ STAFF MOBILITY FOR TEACHING (STA)

Internationalisation is one of the priorities of Politehnica University of Timisoara. We are constantly interested in receiving visitors, in creating new contacts and in reinforcing the existing cooperation with our partners.

Guest teaching assignments can be arranged at Politehnica University of Timişoara under existing Erasmus+ agreements. With the Erasmus+ Programme the sending out-principle holds, which means that in each case the university sending a teaching staff finances his or her stay abroad. Regarding the financing of travel expenses, foreign teaching staff must approach their home university.

Teaching assignments can take several forms: open-lectures targeting students from a variety of study years, study levels and areas of specialisation; lectures included in the regular course-work of the students; intensive workshops; etc.

Requirements:

- The guest lecturer comes for teaching purposes (at least 8 teaching hours per week) from one of our Erasmus+ partner universities;
- The mobility takes place during the teaching periods of the UPT academic calendar if the lectures target bachelor or master degree students, or between October and June if the lecture targets PhD students.
- The Department for International Relations is informed of the intended Incoming Teaching Staff Mobility. A standard form has to be filled in and submitted by e-mail to Mrs. Loredana NENESTEANU (loredana.nenesteanu@upt.ro).

Procedure:

- The future incoming staff member contacts DRI and sends the visiting staff form.
- The Department for International Relations issues and sends a letter of invitation to the guest lecturer in electronic format.
- The teaching plan is set by the guest lecturer in cooperation with the host UPT department. If the incoming lecturer does not have a contact person in the appropriate department at UPT, DRI will find and provide him/her with a contact person. The teaching plan will be agreed upon and signed in electronic format before the start of mobility.
- During the teaching mobility, a visit to the Department for International Relations will be planned.
- The Department for International Relations issues an official letter of confirmation for the Erasmus+ Teaching Staff Mobility.

Incoming staff can choose to stay in the hotels owned by Politehnica University of Timişoara. Both hotels are centrally located and offer single/double rooms with TV, refrigerator and Internet connection. Prices for single rooms vary between ~25 EUR (breakfast included) and ~35 EUR (breakfast, sauna and fitness facilities included). More details here: http://www.upt.ro/en/camine-hotelier.php.

4.2. INCOMING ERASMUS+ TEACHING AND ADMINISTRATIVE STAFF MOBILITY FOR TRAINING (STT)

We are happy to welcome teaching and administrative staff visitors for training according to the rules of the Erasmus+ Programme. If your university is on the list of Erasmus+ partner institutions and you wish to spend a training period at our university, please contact your Erasmus+ Institutional Coordinator and see what the requirements are for you to apply for an Erasmus+ staff training grant at your home institution. The duration of a training mobility can be between 5 days and 6 weeks.

For a good organization of your training at Politehnica University of Timisoara, we kindly ask you to fill in and send by e-mail the application form to <u>Loredana.Nenesteanu@upt.ro</u>.

4.2. LIST OF ERASMUS+ PARTNER UNIVERSITIES IN 2014-2015

| Country | Erasmus Code | University |
|----------------|--------------|--|
| Austria | A GRAZ02 | Technische Universitat Graz |
| Austria | A GRAZ10 | Campus 02 Fachhochschule der Wirtschaft |
| Austria | A KLAGENF01 | Alpen-Adria Universitat Klagenfurt |
| Austria | A SALZBUR08 | Fachhochschule Salzburg GmbH (FHS) |
| Austria | A ST-POLT03 | Fachhochschule St. Pölten GmbH |
| Austria | A WIEN20 | Fachhochschule Technikum Wien |
| Belgium | B ANTWERP01 | University of Antwerp |
| Belgium | B KORTRIJ01 | VIVES University College |
| Belgium | B LIEGE01 | Université de Liege |
| Belgium | B LIEGE38 | Haute Ecole de la Province de Liège |
| Belgium | B LOUVAIN01 | Université Catholique de Louvain |
| Belgium | B MONS21 | Université de Mons |
| Bulgaria | BG SOFIA20 | University of Chemical Technologies and Metallurgy |
| Bulgaria | BG SOFIA28 | College of Telecommunications and Post |
| Cyprus | CY LIMASSO02 | Cyprus University of Technology |
| Czech Republic | CZ BRNO01 | Brno University of Technology |
| Czech Republic | CZ CESKE01 | University of South Bohemia in Ceske Budejovice |
| Czech Republic | CZ OSTRAVA01 | Technical University of Ostrava |
| Czech Republic | CZ PRAHA07 | Charles University in Prague |
| Czech Republic | CZ PRAHA10 | Czech Technical University in Prague |
| Denmark | DK ALBORG01 | Aalborg University |
| | | |

Finland SF JOENSUU09 Karelia University of Applied Sciences

Finland SF OULU11 Oulu University of Applied Sciences

France F ALBI05 Ecole des Mines d'Albi-Carmaux

France F AMIENSO1 Université de Picardie Jules Verne

France F ANGERS01 Université d'Angers

France F ARRAS12 Université D'Artois

France F BELFORTO7 Ecole Supérieure des Technologies & des Affaires

France F BORDEAU01 Université Bordeaux 1

France F BORDEAU54 ENSEIRB MATMECA / IPB

France F BREST01 Université de Bretagne Occidentale - U.B.O.

France F BREST07 Ecole Nationale d'Ingenieurs de Brest

France F BREST09 TELECOM Bretagne

France F CLERMONO2 Université Blaise Pascal Clermont II

France F CLERMON25 Institut Français de Mécanique Avancée

France F COMPIEGO1 Université de Technologie de Compiègne

France F DIJON01 Université de Bourgogne-Dijon

France F DOUAI02 Ecole de Mines de Douai

France F DUNKERQ09 Université du Littoral-côte D'opale

France F EVRY04 Université d'Evry Val D'Esonne

France F GRENOBL22 Institut Nationale Polytechnique de Grenoble

France F LA-ROCH08 Université de La Rochelle

France F LE-HAVR11 Université du Havre France F LILLE01 Université de Lille

France F LILLE11 Université Catholique de Lille

France F LIMOGES01 University of Limoges

France F LIMOGES05 Ecole Nationale de Céramique Industrielle

France F MONTPELO3 Université Paul Valery (Montpellier III)

France F NANTES01 IUT de Nantes

France F NICEO1 Université de Nice Sophia Antipolis

France F NOISY02 Ecole Supérieure d'Ingenieurs en Electronique et Electrotechnique

France F ORLEANSO1 Université d'Orleans

France F PARISO06 Université Pierre et Marie Curie

France F PARISO62 Ecole Nationale Supérieure D'Arts et Métiers (ENSAM)

France F PARIS270 Pole Universitaire Leonard de Vinci F PARIS379 France Institut de management et communication intercultures Université De Pau Et Des Pays De L'Adour France F PAU01 France F RENNES01 Université de Rennes 1 Université Jean Monnet - Saint-Etienne France F ST-ETIE01 France FTOULOUS03 Université Paul Sabatier - Toulouse 3 France FTOULOUS28 Institut National Polytechnique De Toulouse Université de Versailles Saint-Ouentin-en-Yvelines France F VERSAIL11 **Universitat Augsburg** D AUGSBUR01 Germany Rheinische Friedrich-Wilhelms-Universitat Bonn Germany D BONN01 Technische Universitat Carolo-Wilhelmina zu Braunschweig D BRAUNSCO1 Germany Germany D BREMEN01 Universitat Bremen D COBURGO1 Hochschule fur Angewandte Wissenschaften Coburg Germany Brandenburg University of Technology Cottbus-Senftenberg D COTTBUS03 Germany Germany D DARMSTA02 Hochschule Darmstadt D DORTMUN01 Technische Universitat Dortmund Germany Germany D DRESDEN02 Technische University Dresden D EMDENO2 Hochschule Emden/Leer Germany Germany D FREISIN01 Hochschule Weihenstephan-Triesdorf Westfaelische Hochschule Germany D GELSENK02 Germany D HAMBURG03 Technische Universitat Hamburg-Harburg Hochschule Hamm-Lippstadt Germany D HAMM01 Germany D HEIDELB05 SRH Hochschule Germany Technische Universitat Ilmenau D ILMENAU01 Technische Hochschule Ingolstadt Germany D INGOLST01 Friedrich Schiller University of Jena D JENA01 Germany Hochschule Karlsruhe - Technik und Wirtschaft D KARLSRU05 Germany Germany D KONSTANO2 HTWG Hochschule Konstanz Duale Hochschule Baden-Wurttemeberg (DHBW) Lorrach Germany D LORRACH01 Germany D MUNCHEN02 Technische Universitat Munchen D OSNABRU02 Fachhochschule Osnabruck Germany Germany Hochschule Regensburg D REGENSB02 Germany D ROSENHE01 Fachhochschule Rosenheim - University of Applied Science Germany D SAARBRU01 Universitat des Saarlandes

Germany **Universitat Siegen** D SIEGEN01 D STUTTGA01 Germany **Universitat Stuttgart** Germany D WILHELM02 Jade Hochschule Greece G ATHINE34 TEI Athens Greece Technological Educational Institute of Piraeus G EGALEO01 Kavala Institute of Technology Greece G KAVAL01 **University of Piraeus** Greece **G PIREAS01** Greece G THESSAL01 Aristotle University of Thessaloniki Alexander Technological Educational Institute of Thessaloniki Greece GTHESSAL12 Hungary Eotvos Jozsef Foiskola **HU BAJA01 HU BUDAPES02** University of Technology and Economics Budapest (BME) Hungary Hungary **HU BUDAPES16 Obuda University** Hungary **HU GODOLLO01** Szent Istvan University Hungary **HU KECSKEM02 Kecskemet College** Hungary Nyiregyhaza Foiskola **HU NYIREGY04** Hungary **University of Pecs HU PECS01** Hungary University of Szeged **HU SZEGED01** Italy I ANCONA01 Universita Politecnica delle Marche Italy I BENEVENO2 Universita Degli Studi Del Sannio Italy I CAGLIAR01 Universita Degli Studi Di Cagliari Italy I CASSINO01 Universita Degli Studi Di Cassino e Del Lazio Meridionale Italy I CHIETI01 Universita degli studi G. D'Annunzio Chieti Pescara Italy I FERRARA01 Universita Degli Studi di Ferrara I FIRENZE01 Universita Degli Studi di Firenze Italy Politecnico Di Milano Italy I MILANO02 Italy Universita Degli Studi de Napoli Frederico II I NAPOLI01 Italy Università degli Studi di Padova I PADOVA01 Italy Universita Degli Studi Di Palermo I PALERMO01 Italy I ROMA01 Universita Degli Studi di Roma "La Sapienza" Italy Universita Degli Studi Di Salerno I SALERNO01 Italy Universita degli Studi di Sassari I SASSARI01 Politecnico Di Torino Italy ITORINO02 Universita Degli Studi di Trento Italy ITRENTO01

Turiba University

Latvia

LV RIGA09

Lithuania Kaunas University of Technology LT KAUNAS02 Lithuania LT VILNIUS02 Vilnius Gediminas Technical University Lithuania LT VILNIUS23 Vilnius College of Design Lithuania LT VILNIUS24 Kazimieras Simonavicius University Macedonia University for Information Science and Technology St. Paul the Apostle MK OHRID01 University American College Skopje Macedonia MK SKOPJE10 **Netherlands** Universiteit van Amsterdam NL AMSTER01 **Netherlands** NL GRONING01 University of Groningen **Netherlands** NL NIJMEGE01 Radboud Universiteit Nijmegen **Netherlands** Wageningen University NL WAGENIN01 **Netherlands** NL ZWOLLE05 Windesheim University of Applied Sciences N MOLDE01 Molde University College - Specialized University in Logistics Norway **Poland** PL GLIWICE01 Politechnika Slaska **Poland** PL KRAKOW02 AGH University of Science and Technology Lodz University of Technology Poland PL LODZ02 Poland PL LUBLIN01 Maria Curie-Skłodowska University Państwowa Wyższa Szkoła Zawodowa Im. Jana Grodka W Sanoku Poland PL SANOK01 **Poland** Warszaw University of Technology PL WARSZAW02 **Portugal** P ARCOZELO1 Instituto Politécnico do Cávado e do Ave **Portugal** P BRAGA01 Universidade Do Minho **Portugal** P BRAGANCO1 Instituto Politecnico de Braganca **Portugal** Universidade de Coimbra P COIMBRA01 **Portugal** P LEIRIA01 Polytechnic Institute Of Leiria **Portugal** P LISBOA03 Universidade Nova de Lisboa **Portugal** P PORTO02 Universidade de Porto **Portugal** P PORTO05 Instituto Politecnico do Porto ISEP Slovakia Slovenska Technicka Univerzita V Bratislave SK BRATISL01 Slovenia SI CELJE03 International School for Social and Business Studies Slovenia SI LJUBLJA01 University of Ljubljana Slovenia **University of Maribor** SI MARIBOR01 Universitat Politecnica de Catalunya Spain E BARCELO03

Universidad del Pais Vasco

University of Burgos

Spain

Spain

E BILBA001

E BURGOS01

| Spain E GIRONA02 | Universitat de Girona |
|------------------|-----------------------|
|------------------|-----------------------|

Spain E GRANADA01 Escuela Tecnica Superior de Arquitectura de Granada

Spain E MADRIDO5 Universidad Politecnica de Madrid

Spain E MADRID160 Universidad a Distancia de Madrid

Spain E OVIEDO01 Universidad de Oviedo

Spain E SEVILLA01 Universidad de Sevilla

Spain E VALLADOO1 University of Valladolid

Spain E VIGO01 University of Vigo

Sweden S LINKOPI01 Linkopings Universitet

Sweden S LULEA01 Lulea University of Technology

Turkey TR ADANA01 Cukurova University

Turkey TR ANKARA08 Cankaya University

Turkey TR ANTALYA01 AKDENIZ UNIVERSITESI

Turkey TR BURDUR01 Mehmet Akif Ersoy University

Turkey TR ERZURUM01 Ataturk University

Turkey TR ISTANBU03 Istanbul University

Turkey TR ISTANBU07 Yldiz Technical University

Turkey TR ISTANBU45 Nisantasi University

Turkey TR KOCAELIO2 Kocaeli University

Turkey TR MUGLA01 Mugla Universitesi

Turkey TR NIGDE01 Nigde Universitesi

Turkey TR SAMSUN01 Ondokuz Mayis University

Turkey TR SIIRT01 Siirt University

Turkey TR VANO1 Yüzüncü Yıl Üniversitesi

United Kingdom UK BRIGHT002 University of Brighton

United Kingdom UK CANTERB01 University of Kent

United Kingdom UK EDINBUR01 University of Edinburgh

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