



TIMREX: Master in Mineral Exploration

LAUNCH YOUR CAREER

IN RAW MATERIALS



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Introduction

A landscape of wind turbines on a hill at sunrise or sunset, with a sea of clouds below. The sky is a mix of orange, yellow, and purple, and the clouds are a soft, hazy blue. The turbines are white and stand tall against the colorful background. The foreground is a grassy hillside.

Our modern lifestyle relies on raw materials. From the iron and steel of our railway infrastructure to the gold and silver in the circuitry of smartphones: raw materials are everywhere. The transition to a climate neutral future requires cobalt for electric vehicles, lithium for rechargeable batteries, silicon for solar panels, and rare earth elements for wind turbines that generate renewable energy.

As the world grows smaller and more hyper-connected, the impact of society on the Earth has never been more visible. It is now clear that we need to shift to a circular economy in order to responsibly use the Earth's finite resources. But what can just one individual do to help? More than you think! Real change requires courage, innovative thinking, and collective action – the same skill set that EIT RawMaterials Academy looks for in prospective students. Are you ready to mine your raw talent, help shape a more circular, green economy, and create sustainable solutions for tomorrow?

What do we offer students?

EIT RawMaterials Academy offers students a unique opportunity to learn in a dynamic environment, focusing on real-life challenges. Awarded by the EIT (European Institute of Innovation and Technology), a body of the European Union, the EIT Label is a certificate of quality that is granted only to excellent educational programmes at the master's and doctoral level.

As a student of an EIT-Labelled programme from EIT RawMaterials Academy, you'll be part of the largest European raw materials network with more than 300 organisations as partners, including higher education professionals, researchers, and industry experts from over 20 European countries. As an EIT Label student, you will be welcomed into this network and will champion and contribute to the EIT RawMaterials goals of finding new, innovative solutions to secure the sustainable supply of raw materials across the value chain: from exploration, mining and mineral

processing to recycling, substitution and a circular economy. EIT RawMaterials aims to equip a new generation of innovators in Europe with the necessary entrepreneurial mind-set for designing and delivering materials solutions. You'll also get the chance to collaborate internationally and develop sustainable solutions to pressing economic, environmental and societal challenges. And long after you graduate, you can stay connected via EIT RawMaterials Alumni.



JOIN AN EIT-LABELLED PROGRAMME AND BECOME A GLOBAL GAME-CHANGER, EQUIPPED WITH THE KNOWLEDGE, SKILLS AND EXPERIENCE EMPLOYERS SEEK.



What to expect?

→ Study tours and visits to innovative companies and industrial sites

→ Course modules dedicated to entrepreneurship and innovation skills

→ EIT RawMaterials summer schools and interdisciplinary courses

→ Membership of the EIT RawMaterials Alumni community

→ Exciting new ways of learning: online courses, virtual and augmented reality and MOOCs

→ EIT RawMaterials Innovation support: business plan competitions, innovation bootcamps and funding

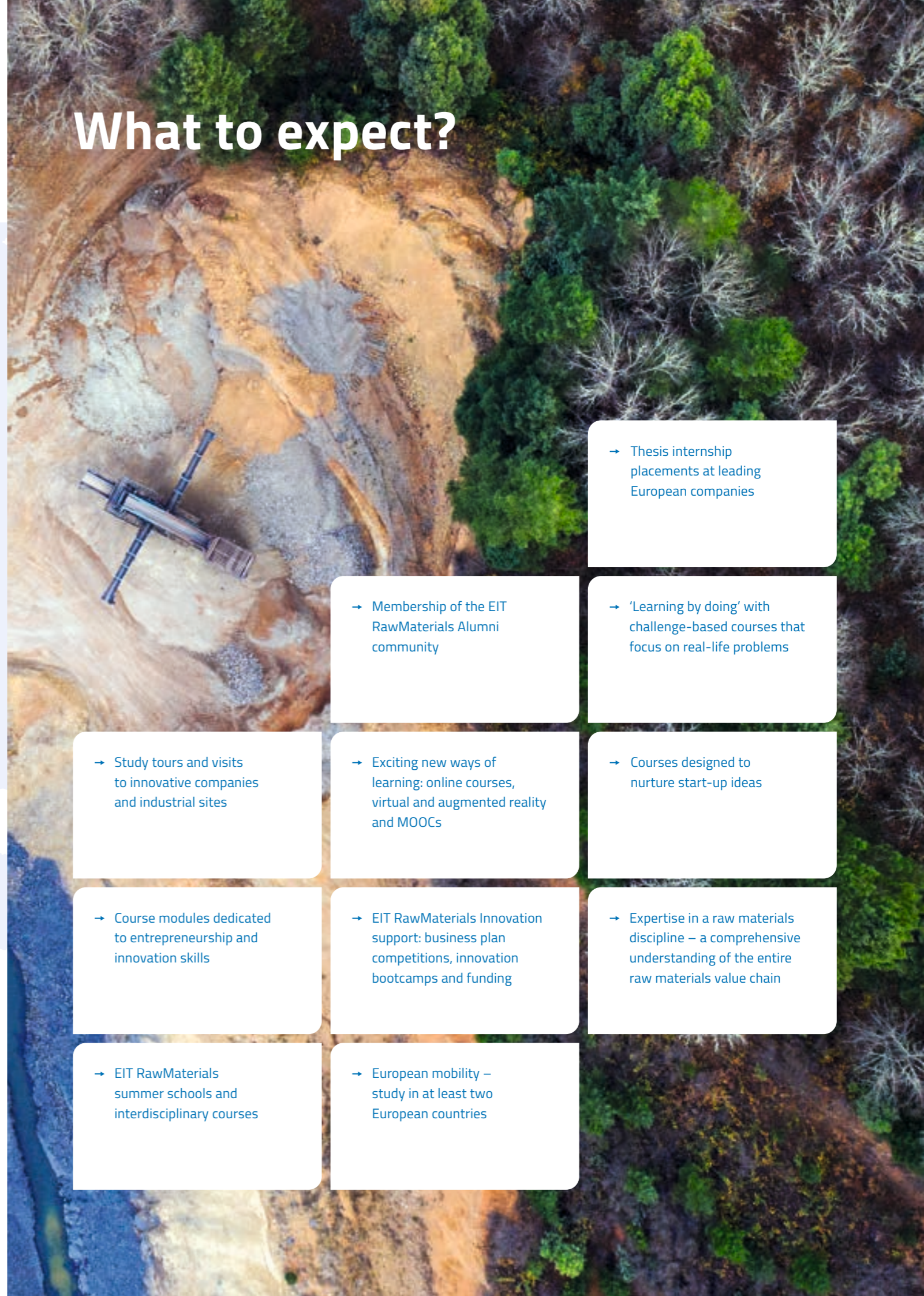
→ European mobility – study in at least two European countries

→ Thesis internship placements at leading European companies

→ 'Learning by doing' with challenge-based courses that focus on real-life problems

→ Courses designed to nurture start-up ideas

→ Expertise in a raw materials discipline – a comprehensive understanding of the entire raw materials value chain



Exclusive activities and support for EIT-Labelled students

Students on EIT-Labelled master's programmes within the EIT RawMaterials Academy receive a range of additional opportunities to boost their innovation and entrepreneurship skills, grow their network in the raw materials sector and gain the experience they need to thrive.

These exclusive events bring together EIT-Labelled students from across the Master School, and form the basis of your shared learning experiences, making you a full member of the EIT RawMaterials community.



SEMESTER 1

- **Label Induction Days**
Meet the EIT RawMaterials Academy and learn how to get involved in our community and access the many opportunities on offer. Sign up for EIT RawMaterials Alumni and start growing your network.
- Vote for your representative on the Label Student Board, or stand for election!

SEMESTER 2

- **Label Start-Up! Days**
Get together with 100 Label students and learn from EIT RawMaterials supported start-ups. Hear about the experience of setting up a company in the raw materials sector, and network with entrepreneurs.
- All costs covered by EIT RawMaterials.

SEMESTER 3

- **The RACE**
The Raw and Circular Economy Expedition (RACE) is a challenge-based summer school for 70 students from around the world, taking place over two weeks in different European countries. Find out more at race.eitrawmaterials.eu.
- Some participation costs covered by EIT RawMaterials for Labelled students selected for participation.

SEMESTER 4

- **Label-Launch!**
Celebrate completing your EIT-Labelled Master's programme. Take part in matchmaking events with EIT RawMaterials industry partners and start-ups, and make new connections with raw materials professionals.

Do you have a raw materials business idea?

EIT RawMaterials offers a range of support for individuals and companies with innovative business ideas, including:

Lab2Market

→ A three-term entrepreneurship training programme, exclusively for EIT Label students and graduates. Lab2Market will help you come up with a business idea, create a start-up and connect you with investors and customers. Grants are available for selected participants.

EIT Jumpstarter

→ One of Europe's top pre-accelerator programmes, to help you develop your business idea and understand what's needed to create a successful start-up.

EIT RawMaterials Accelerator

→ A three-stage accelerator programme to help start-ups with a developed product to bring their solution to the market.

Booster Call

→ Financial and network access support for start-ups and SMEs in the raw materials sector.

EIT RawMaterials Alumni

From the moment you join an EIT-Labelled Master's programme in the EIT RawMaterials Academy, you are eligible to join EIT RawMaterials Alumni. This organisation provides a great opportunity to connect with the EIT RawMaterials ecosystem and varied EIT RawMaterials activities, such as business idea competitions, start-ups, professional development courses and Master's and PhD programmes.

It is run by and for its members, who can take part in events, and develop their careers through internships and job offers, networking activities and much more, forming a hub for a diverse range of raw materials students, academics and professionals. Furthermore, EIT RawMaterials Alumni provides you with a connection to the wider EIT Alumni community and alumni events around Europe.





Timrex

TIMREX Master in Mineral Exploration

Awarded the EIT Label in 2022

Built on existing strong minerals exploration MSc programmes, TIMREX is a joint master's degree in mineral exploration with add-on innovation and entrepreneurship skills. The programme has a strong emphasis on field activities and the application of innovative exploration techniques and solutions is the specialty of TIMREX among the EIT-Labelled master programmes. Intensive fieldwork is expected from the students during the summer period between the first and second years of study. Students will develop their entrepreneurship, innovative and socio-civic skills, with strong support from industrial and research partners.

Double Diploma	Graduates will be awarded a double or single Master of Science degree from University of Miskolc, Wrocław University of Science and Technology, the University of Zagreb and/or Luleå University of Technology (depending on the study pathway chosen by the student). Graduates will also receive the EIT Label Certificate.
Credits	120 ECTS, 24 months
Language of Instruction	English
Starts in	September 2024 / February 2025 depending on year one university chosen
Requirements	Candidates should have a Bachelor's degree with strong earth sciences background (BSc in Geology, Geophysics, Earth Sciences, Earth Sciences Engineering, Geosciences Engineering, Mining Engineering), as well as an English language certificate (advanced knowledge level of English, minimum B2 level, for details please visit www.timrex-master.eu)
Tuition fees	Please consult the TIMREX website timrex-master.eu for up-to-date information
Application Period	First round: 15 January – 31 March 2024 Please visit timrex-master.eu for details
Scholarships	For students beginning in September 2024 or February 2025, EIT Label scholarships from EIT RawMaterials of €15,000 per eligible student are available. For information on how EIT Label scholarships will be awarded and who is eligible, please contact the coordinating university directly: timrex@uni-miskolc.hu



“The TIMREX summer school taught me many things starting from the geology of the region to the most innovative exploration techniques. I got a better understanding of igneous ore-forming processes, data interpretation, and visualisation methods. I am very glad that I had an opportunity to participate in this summer school, which gave me a lot of knowledge and brought me together with so many nice people.”

— IRMA BECELYTE

PARTICIPATING UNIVERSITIES

University of Miskolc

Hungary

University of Zagreb - Faculty of Mining, Geology and Petroleum Engineering (RGNF)

Croatia

Wrocław University of Science and Technology

Poland

Luleå University of Technology

Sweden

FOR MORE INFORMATION

Faculty of Earth and Environmental Science and Engineering, University of Miskolc

Hungary,

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timrex@uni-miskolc.hu

Programme Structure

The TIMREX joint master programme is organised along seven mobility routes between the four academic partners. First year study is offered in parallel by the UM, UNIZG-RGNF and WUST, while the second year offers specialisations along the mobility routes.

Visit timrex-master.eu to explore the details of the 8 route options in the TIMREX study programme.

The cohort starts in 2024 September at UM and UNIZG - RGNF and in 2025 February at WUST. Pathways involving UM, WUST and UNIZG-RGNF offer a double degree.

TIMREX YEAR 1

(APPLIED EARTH SCIENCES AND EXPLORATION)

University of Miskolc

University of Zagreb

Wrocław University of Science
and Technology

MOBILITY TIMREX YEAR 2

(SPECIALISATIONS)

Luleå University of Technology
(ore mineral exploration)

University of Miskolc
(geophysical methods and instrumentation for exploration)

University of Zagreb
(prospecting and exploration of non-metallic mineral resources)

Wrocław University of Science
and Technology
(applied skills in mining geology)



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PROFESSIONAL PROFILES AFTER GRADUATION

Earth science specialists will be able to apply innovative mineral exploration methods and techniques in the field and integrate the collected data with comprehensive analytical and laboratory results. Students interested in equipment development or programming will have the opportunity to specialise in these topics, contributing to research groups and start-ups to develop sensors, portable analytical equipment, data processing and visualising software. In addition, students with an entrepreneurial mindset will learn entrepreneurial and socio-civic skills and attitudes suitable to becoming employed by a junior company, or to become a freelance expert – mentored by the industrial and research partners of the consortium.

INNOVATIVE FIELD-BASED MINERAL EXPLORATION SOLUTIONS WITH TIMREX

The objective of the TIMREX master programme is to develop a high-quality education programme in the field of mineral exploration with double-degree routes, structured mobility pathways, mentoring sessions, and strong field-based training. The pillars involved in the education journey comprise 1) strong field work using innovative mineral exploration technologies applied in greenfield and brownfield mineral occurrences, 2) solid theoretical background for completion and management of exploration campaigns, and 3) processing and interpretation of field and laboratory-derived data with specialised software, as well as 4) development of entrepreneurial and socio-civic competences to join or establish junior exploration companies.



ARE YOU A STUDENT WHO IS:

- Keen to develop a career in mineral exploration?
- Motivated to learn about innovative techniques and technologies in the field?
- Interested in spending one semester at a partner university to develop a different specialisation?
- Interested in acquiring entrepreneurship skills and building self-confidence for the market?

VISIT [TIMREX-MASTER.EU](https://timrex-master.eu)
TO FIND OUT MORE AND APPLY

Programmes

Nine Master's programmes within the EIT RawMaterials Academy hold the EIT Label. Graduates from all EIT-Labelled programmes are awarded a degree from one or more of the participating universities, with an EIT Label Certificate confirming graduation from an EIT-Labelled programme.



MEITIM

Master in Entrepreneurship,
Innovation and Technology
Integration in Mining



RaVeN

Master in
Mining Engineering



SINReM

International Master
of Science in Sustainable
and Innovative Natural
Resource Management



AMIR

Master in
Advanced Materials:
Innovative Recycling



AMIS

Master in Advanced
Materials for Innovation
and Sustainability



EMerald

Master in Georesources
Engineering (Innovative
Education in Geometallurgy
and Circular Economy)



SUMA

Master in
Sustainable Materials



TIMREX

Master in
Mineral Exploration

Labelled by:



A body of the European Union



Supported by:



Co-funded by the
European Union



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