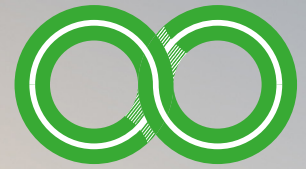




Co-funded by the
European Union



AMIR master

AMIR: Master in Advanced Materials – Innovative Recycling

LAUNCH YOUR CAREER

IN RAW MATERIALS





TABLE OF CONTENTS

Introduction	4
What do we offer students?	6
What to expect?	7
Exclusive activities and support for EIT-Labelled students	8
Do you have a raw materials business idea?	10
EIT RawMaterials Alumni	11
AMIR	12
Master in Advanced Materials - Innovative Recycling	
Programmes	16

Introduction



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?



→ Thesis internship placements at leading European companies

→ Membership of the EIT RawMaterials Alumni community

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

→ Study tours and visits to innovative companies and industrial sites

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

→ Courses designed to nurture start-up ideas

→ Course modules dedicated to entrepreneurship and innovation skills

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

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

→ EIT RawMaterials summer schools and interdisciplinary courses

→ European mobility – study in at least two European countries

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

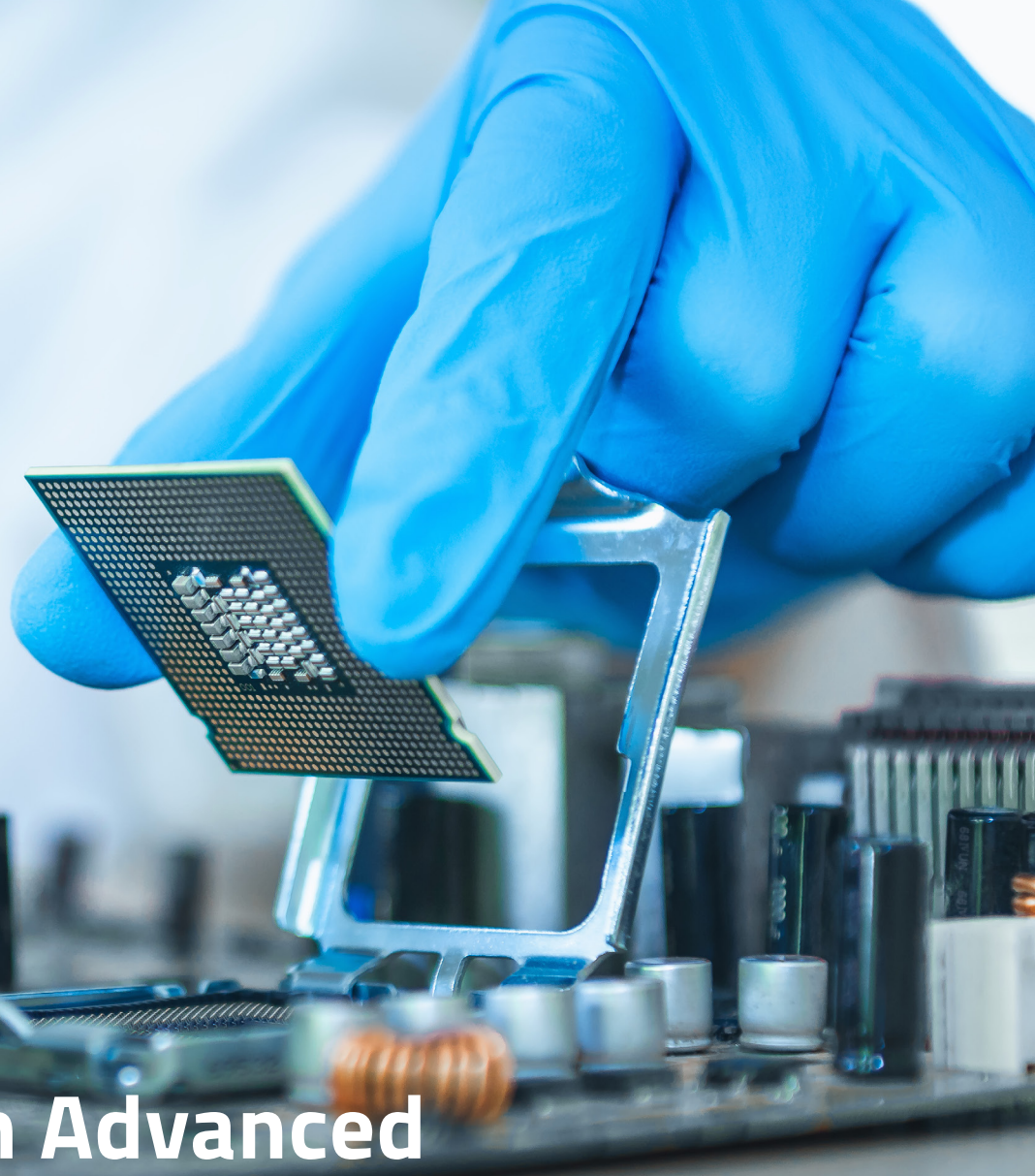
From the moment you join an EIT-Labelled Master's programme in the EIT RawMaterials Academy, you are eligible to join EIT RawMaterials Alumni. This organisation provides a great opportunity to connect with the EIT RawMaterials ecosystem and varied EIT RawMaterials activities, such as business idea competitions,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





AMIR master



Master in Advanced Materials: Innovative Recycling

Awarded the EIT Label in 2018

THE CHALLENGE

Materials are the building blocks of the modern global economy and are instrumental for the transition to a green, circular and carbon-neutral economy. Thirty of these materials have been defined by the EU as critical, meaning that they are both highly important to the EU economy and in dangerously low domestic supply. Accessing the known primary raw material sources has become more challenging, while amounts of industrial waste and end-of-life-products are rapidly increasing. These waste streams contain secondary raw materials,

many of which are critical and can be recovered, diversifying supply and delivering usable materials to meet increasing demands. To achieve this, we need skilled professionals with advanced technical knowledge of recycling, an understanding of the full raw materials value chain and the skills required to transform knowledge into solutions and business. The AMIR master's programme was created to fulfil this need by educating future international professionals who will develop new routes for materials recycling.

With the support of the
Erasmus+ Programme
of the European Union



Double Diploma	Graduates of the AMIR programme will be awarded a single or double Master of Science degree, depending upon their chosen pathway. Graduates will also be awarded the EIT Label Certificate.
Credits	120 ECTS, 24 months
Language of Instruction	English
Starts in	September
Requirements	The programme is aimed at candidates who have a bachelor's degree in Engineering and Environmental Sciences with advanced knowledge in Chemistry (minimum 3 years of study or 180 ECTS credits), or a bachelor's degree in Chemistry, Physical-Chemistry, Materials (or Matter) Sciences. Candidates must also demonstrate English language proficiency.
Tuition fees	Please consult the AMIR website (www.amir-master.com)
Application Period	For more details, please check www.amir-master.com/apply/
Scholarships	For students beginning in September 2024, 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: amir.master@u-bordeaux.fr . Additional scholarships and grants may be available – visit www.amir-master.com for details. A number of Erasmus Mundus Joint master's degree scholarships are available, covering full tuition fees and living expenses.



“I chose AMIR because I wanted to play a pioneering role in the responsible utilisation of secondary raw materials. The programme has equipped me with skills in several end-of-life options for materials and taught me strategies to incorporate sustainable designs early in material research. The highlight of the programme has been the enjoyable experience of attending various EIT RawMaterials Label events, which enabled me to build a large network of like-minded sustainability experts and helped me to develop life-long friendships while travelling across Europe.”

— **HAMZA JAMIL, PAKISTAN (AMIR)**

PARTICIPATING UNIVERSITIES

University of Bordeaux

France

NOVA University Lisbon

Portugal

TU Darmstadt

Germany

University of Liège

Belgium

Technical University of Madrid

Spain

University of Miskolc

Hungary

FOR MORE INFORMATION

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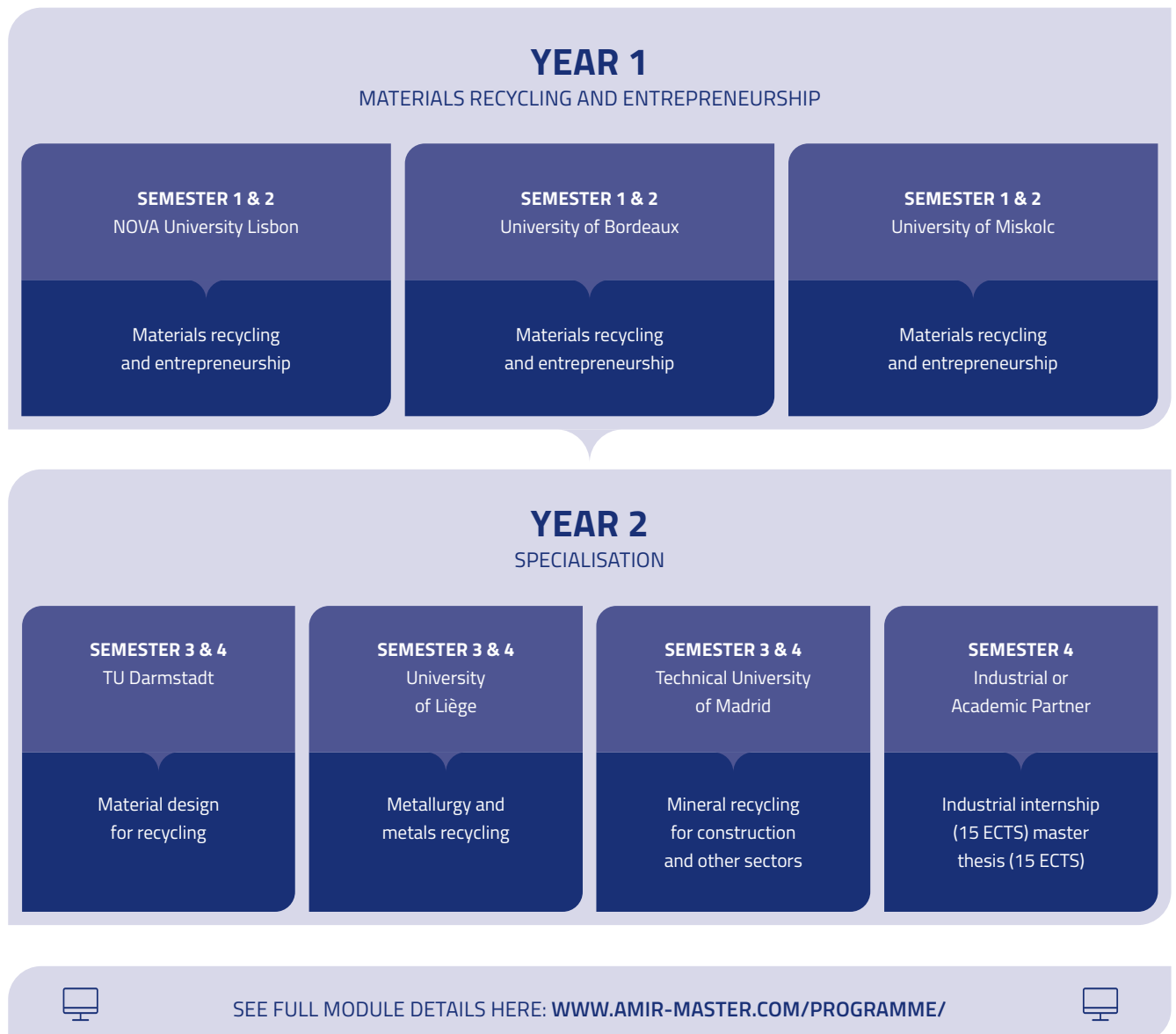
amir.master@u-bordeaux.fr

www.amir-master.com

Programme Structure

YEAR 1 of the master's programme takes place at the University of Bordeaux, NOVA University Lisbon or the University of Miskolc. Students learn about general and technical aspects of the raw materials value chain (general chemistry, material science, the lifecycle of materials), as well as about the main learning outcomes expected from an EIT-Labelled programme: sustainability, intellectual transformation, value judgments (ethical, scientific and sustainability challenges), creativity, innovation, leadership and entrepreneurship. In addition, a new module focusing on batteries has been introduced into the programme at Bordeaux, in line with the key trend of electrification in the development of sustainable materials for future mobility.

YEAR 2 takes place at one of the other partner universities, allowing students to gain specialist knowledge in their area of interest. This is followed by an industrial internship and completion of the master thesis.



Master in Advanced Materials: Innovative Recycling

Awarded the EIT Label in 2018

PROFESSIONAL PROFILES AFTER GRADUATION

Graduates of the AMIR programme will be fully equipped to take on professional roles in the recycling sector:

- Process optimisation
- Materials design
- Plant administration
- Project administration

Furthermore, the skills gained are widely required across sectors, including information and communication technologies, building construction, energy, machinery tools, and mobility. Graduates also obtain the necessary skills and knowledge to set up their own company or work in sales and marketing. Finally, doctoral studies are another possibility, and graduates of the AMIR programme will be fully equipped to enter PhD programmes in the recycling sector to pursue engineering careers or academic research.

ARE YOU A STUDENT WHO IS:

- Interested in the full value chain of raw materials?
- Keen to make a difference in confronting the challenges surrounding waste and contributing to the development of sustainable solutions?
- Motivated to spend time working with top companies and research organisations in the recycling sector?
- Driven to become an entrepreneur or intrapreneur who makes innovation happen?

VISIT AMIR-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.



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)



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



SUMA

Master in
Sustainable Materials



TIMREX

Master in
Mineral Exploration

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