RawMaterials ACADEMY

EIT RawMaterials and the EIT Label

Introduction to the EIT-Labelled Master Programmes

This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation

The EIT Label

What is EIT RawMaterials and how can I contribute to their mission?

EIT RawMaterials is the largest and strongest consortium in the raw materials sector worldwide. Its vision is a European Union where raw materials are a major strength. EIT RawMaterials aims to train the next generation of raw materials experts, offering prospective students the unique opportunity to learn holistically about raw materials and circular economy challenges through the lens of entrepreneurship and innovation. During and after graduating from EIT RawMaterials Labelled programmes, the classroom becomes a laboratory, ideas are converted to solutions and graduates become societal game-changers.

EIT RawMaterials is part of a unique European initiative: EIT, the European Institute of Innovation and Technology. EIT's educational mission is to raise a new generation of innovators in Europe with an entrepreneurial mindset. The EIT Label is a certificate of quality that is awarded only to excellent educational programmes at the Master and Doctoral level.

As a student of an EIT RawMaterials Labelled programme, you will be part of the largest global raw materials partnership – with more than 100 partners from 20 EU countries coming from academia, research institutions and industry. Your collaboration will contribute to the EIT RawMaterials vision of finding new, innovative solutions to secure the sustainable supply of raw materials across the entire raw materials value chain – from mining to extraction, processing to reuse, recycling and circular economy strategies.

Are you interested in:

- **Becoming a global game-changer?**
- **Collaborating internationally to develop creative and sustainable solutions to resource and societal challenges?**
- **Gaining practical experience in your chosen industry sector, rather than only learning theory in a lecture hall?**
- **Getting involved in a dynamic start-up scene?**
- **Enhancing your educational experience and obtaining dual/joint degrees by spending each semester at different top universities?**
- **Becoming part of the EIT Alumni Community?**
- **Then the EIT RawMaterials Labelled programmes are for you!**

Why should I apply to an EIT Labelled programme?

EIT RawMaterials Labelled programmes offer you all of this

Seven Education programmes within the EIT RawMaterials Academy have been awarded the EIT Label

Five Master programmes

- AMIS – Master in Advanced Materials for Innovation and Sustainability
- EMC – European Mining Course
- EMerald – Master in Georesources Engineering
- SINReM – Master in Sustainable and Innovative Natural Resource Management
- SUMA – Master in Sustainable Materials

Two Doctoral programmes

- IDS-FunMat-INNO – International Doctoral School in Functional Materials
- NEAT Materials – New Approaches and Technologies in Materials Production

Graduates from all EIT-labelled programmes are awarded either a dual or joint degree from at least two of the participating universities, with an EIT Label certificate confirming graduation from an EIT-labelled programme.

SUMA
Master in Sustainable Materials
Awarded the EIT Label in 2016

Diploma	Dual Master of Science degree awarded from two of the following universities: • KU Leuven • Montanuniversität Leoben • University of Trento • Grenoble INP • University of Milano-Bicocca - EIT Label Certificate
Credits	120 ECTS, 24 months
Language of Instruction	English
Starts in	September
Requirements	Generally, all students should have: Bachelor of Science or Bachelor of Engineering (or equivalent), as well as proof of English language proficiency Candidates must meet the admission criteria of the Master's Degree Programmes of both partner institutions of their chosen track. Please refer to the individual entry university websites for information on admission requirements.
Fees	Fees vary based on programme track and country of origin. Total fees for EEA students range from 77€ to 5.500€. Total fees for non-EEA students range from 600€ to 12.000€.
Application Period	Application for the SUMA programme is a multi-step process. Applicants should register on the SUMA website: www.master-suma.eu For information on the registration/application deadlines for the entry universities, please check the following: KU Leuven - www.kuleuven.be/english/application/instructions Montanuniversität Leoben - starter.unileoben.ac.at/en/3489/ University of Trento – offertaformativa.unitn.it/en/lm/materials-and-production-engineering/applying University of Milano-Bicocca (UNIMIB) - www.unimib.it/go/45797/Home/English/MENU-DX/Prospective-Students/How-to-enroll
Scholarships	For students beginning in September 2018, EIT scholarships up to **EUR 9.000** per student are available with additional financial support for student involvement in conferences, summer schools and other events. For information on how EIT scholarships will be awarded and who is eligible, please contact the coordinating university directly: piet.wostyn@kuleuven.be

Participating Universities

- KU Leuven - Belgium
- Montanuniversität Leoben - Austria
- University of Trento - Italy
- Grenoble INP - France
- University of Milano-Bicocca- Italy

The Challenge

Materials provide the foundation of the modern global economy. Moreover, materials, many of them critical, are becoming increasingly relevant for the shift to a decarbonizing society as materials enable the transition to renewable energy, electric mobility, resource efficiency, among others. In order to ensure a future society is supplied with a sustainable stream of raw materials, robust solutions and game-changing technologies will be pivotal to ensuring material supply keeps pace with demand.

Sustainable material solutions with SUMA

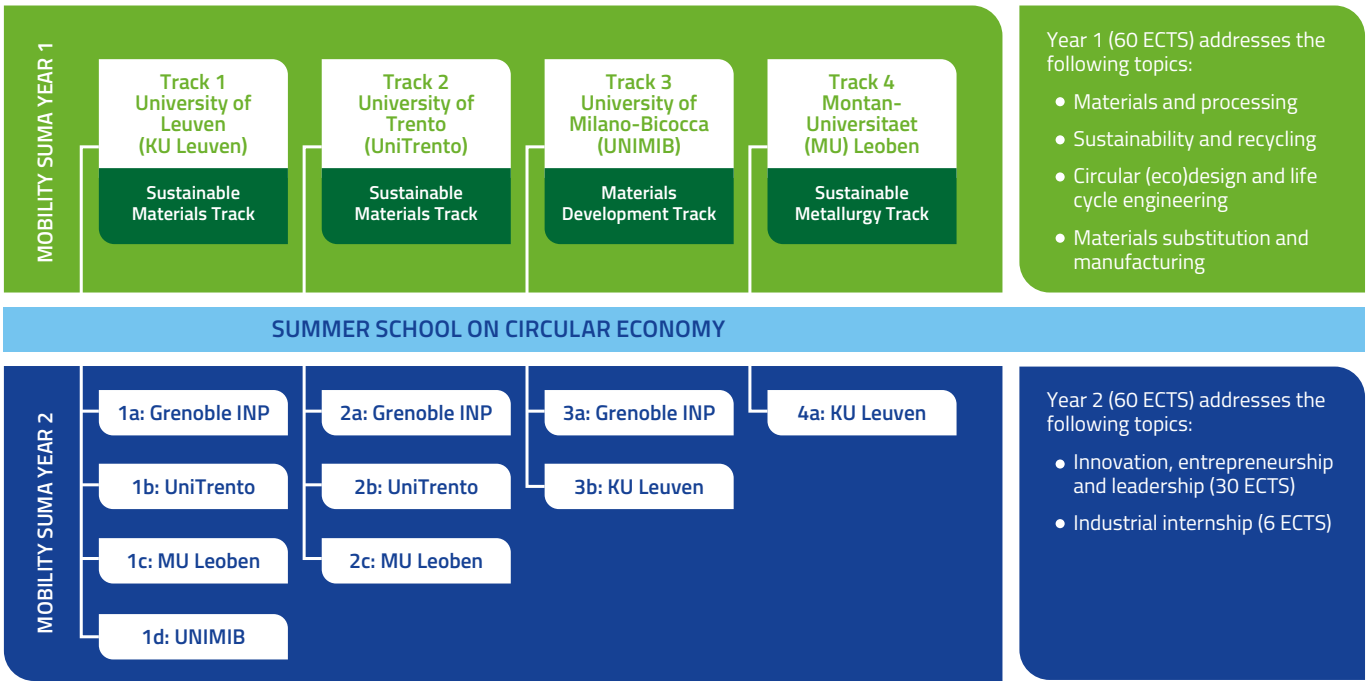
The SUMA Master programme aims to train tomorrow's resource engineers in collaborative work in a global world, gathering together some of the best educational programmes in the field of sustainable materials engineering in Europe. The goal is to ensure young scientists obtain a solid background in chemistry and physics, with competences for designing and tailoring new material systems for specific functions, and with a specific view to the sustainability of processes and technologies in the field of material development. SUMA puts a particular strong focus on innovation, entrepreneurship and leadership and takes a holistic approach to the materials paradigm by exploring circular (eco)design, materials substitution, life cycle engineering and circular economy design, materials processing and recycling, manufacturing and innovation.

Programme Structure

The Sustainable Materials (SUMA) Master programmes are two year programmes embedded in the engineering programmes of the participating universities:

- KU Leuven - Master of Materials Engineering
- Montanuniversität Leoben - Master in Sustainable Materials
- University of Trento – Master in Materials and Production Engineering
- INP Grenoble – Master in Sustainable Industrial Engineering
- University of Milano-Bicocca (UNIMIB) – Master in Materials Science

There are in total 10 tracks, each of which has been awarded the EIT Label. Each track of the SUMA programme consists of one full year at an entry university, followed by a second year at one of the other participating universities.



Innovation and Entrepreneurship Training

As an EIT-labelled Master programme, SUMA recognizes the importance of providing students with the opportunity to explore the economic relevance of sustainable materials solutions and how they are practically implemented in industrial and societal settings. SUMA students will be provided with innovation and entrepreneurship training addressing the following:

- Courses dealing with the implementation of an innovation strategy at a company level and the management of the product development process and strategic management, creativity and decision making for product development
- Business simulation games
- Testimonies given by young entrepreneurs on the role of engineering in the start-up of technological spin-off companies
- Case studies presented by industrial and company experts in the field
- Small group and individual project work addressing real world problems

One-week Summer School

Every year the SUMA Master programmes organize a Summer School where all students from the different tracks come together to learn from leading experts on a particular sustainable materials topic. During the summer school, students will work together in teams on societal and technological challenges, using the knowledge and lecture content from the expert summer school faculty. The 2017 edition took place in Leuven and discussed the topic of **'Digitizing the Circular Economy'** where students learned how Internet of Things (IoT), big data analysis and Industry 4.0 principles can be applied to sustainable materials processing. The 2017 SUMA Summer School enabled students to take a systems approach by exploring how Circular Economy Engineering is essential for sustainable process metallurgy, recycling and design for recycling.

Professional profiles after graduation

The SUMA Master programme aims at training scientists with a solid background in chemistry and physics, with competences for designing and tailoring new material systems for specific functions, and with a specific view to the sustainability of processes and technologies in the field of material development.

The main job opportunities are in industries and research centres in Europe working on the development and production of functional materials for advanced applications and high technology.

Graduates can start a career as highly valued future leaders in positions of responsibility in managing advanced material design, production processes and material qualifying protocols in high tech firms, material diagnostics and analysis in industries and research centres, and material development projects and scientific research projects in the field of material science and technology innovation.

Are you a student who is

- Interested in earth sciences, mining, materials sciences and engineering?
- Motivated to explore the connection between materials technology and its environmental and socio-economic factors?
- Keen to become entrepreneurial and start your own company?
- Motivated to work closely with industry and research on cutting-edge challenges?

For more information:

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