

**LEARNING AGREEMENT
UNIMIB – KU-LEUVEN**

TYPE-A UNIMIB TRACK– *FUNCTIONAL MATERIALS* – MSc in Materials Science & Nanotechnology

1st YEAR at UNIMIB

First year UNIMIB courses

(To be attended)

Associations with KU-LEUVEN courses

(Not to be attended but to be indicated in the LA)

AREA 2	TAF B – ChimFisMat	credits
Metals Science and Sustainability		6

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	credits
Metals: Production and Recycling	6

AREA 1	TAF B – ChimFisMat	credits
Materials Spectroscopy and microscopy		9

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	credits
Materials Characterization techniques I	6
Design and Analysis of Experimentation	3

AREA 1	TAF C – Aff./integ.	credits
Strategies for Materials Synthesis		9

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	credits
Ceramics and Powder Metallurgy	6
Physics and mechanical behaviour of polymers	3

AREA 1	TAF B – ChimFisMat	credits
Solid State Physics		6

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	credits
Materials Modelling & Simulation Techniques	6

AREA 2	TAF B – ChimFisMat	credits
Physical Chemistry of Solids		6

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	credits
Surface Science and Engineering	6

AREA 1	TAF C – Aff./integ.	credits
Mathematical methods for materials science		6

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	credits
Project work and problem solving linked to the core courses: Part I	3
Project work and problem solving linked to the core courses: Part II	3

AREA 1	TAF B – ChimFisMat	credits
Thermodynamics and kinetics of materials		6

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	credits
Advanced Metal processing & case studies	6

AREAs 2-7	TAF B – ChimFisMat	credits
Physics of soft matter nanostructures		6

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	credits
Materials physics and technology for nanoelectronics	6

AREA 7	TAF B – ChimFisMat	credits
Chemistry and Technology of Polymers and Industrial Applications		6

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	credits
Polymer Processing	3
Design and Applications of Polymers and Composites	3

2ND YEAR at KU-LEUVEN

Second year KU-Leuven courses

(To be attended)

	credits
KU LEUVEN FREE ELECTIVE COURSE	6

	credits
Engineering and Entrepreneurship	6

	credits
Nanomaterials for nanoelectronics	3
Advanced ceramic materials	3

	credits
Sustainable Materials Management	3
Resource Recovery and Recycling	3

	credits
Project Management	3

	credits
Engineering Economy	3

	credits
Industrial Internship	6
Master Thesis	24

Associations with UNIMIB courses

(Not to be attended but to be indicated in the LA)

FREE	TAF D	credits
UNIMIB FREE ELECTIVE COURSE		6

AREA 6	TAF B – Ing Mat	credits
Engineered Nanomaterials		6

AREA 6	TAF D	credits
Nanotechnology and Innovation		6

AREA 7	TAF D	credits
Low Environmental Impact Materials and Processes		6

Foreign students	credits
Further Skills – Italian – A2 Level (or Higher)	3

Italian students	credits
Further Skills – Laboratory of Scientific Literacy	3

	credits
Internship	3

	credits
Master Thesis	30