SALONE DELL'ORIENTAMENTO 2026

CORSO DI LAUREA MAGISTRALE

INGEGNERIA DEI MATERIALI PER L'INDUSTRIA 4.0

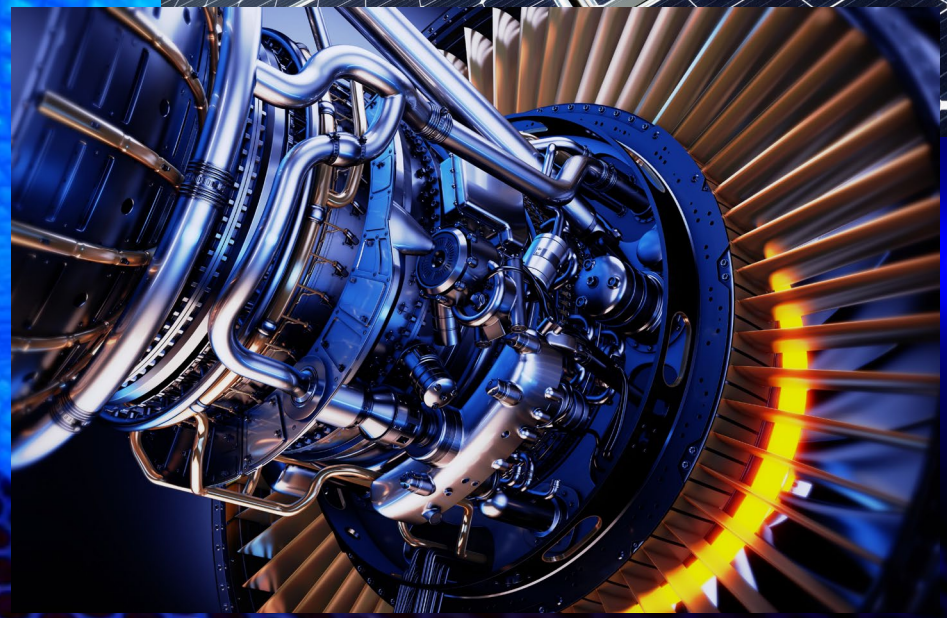
MATERIALS ENGINEERING FOR INDUSTRY 4.0

Politecnico di Torino

SCOPRI TUTTI I CORSI DI STUDIO A.A. 2026/27 www.polito.it

https://youtu.be/c79WBP_xoAc?si=DlEUyAxZ_ojNL8mh

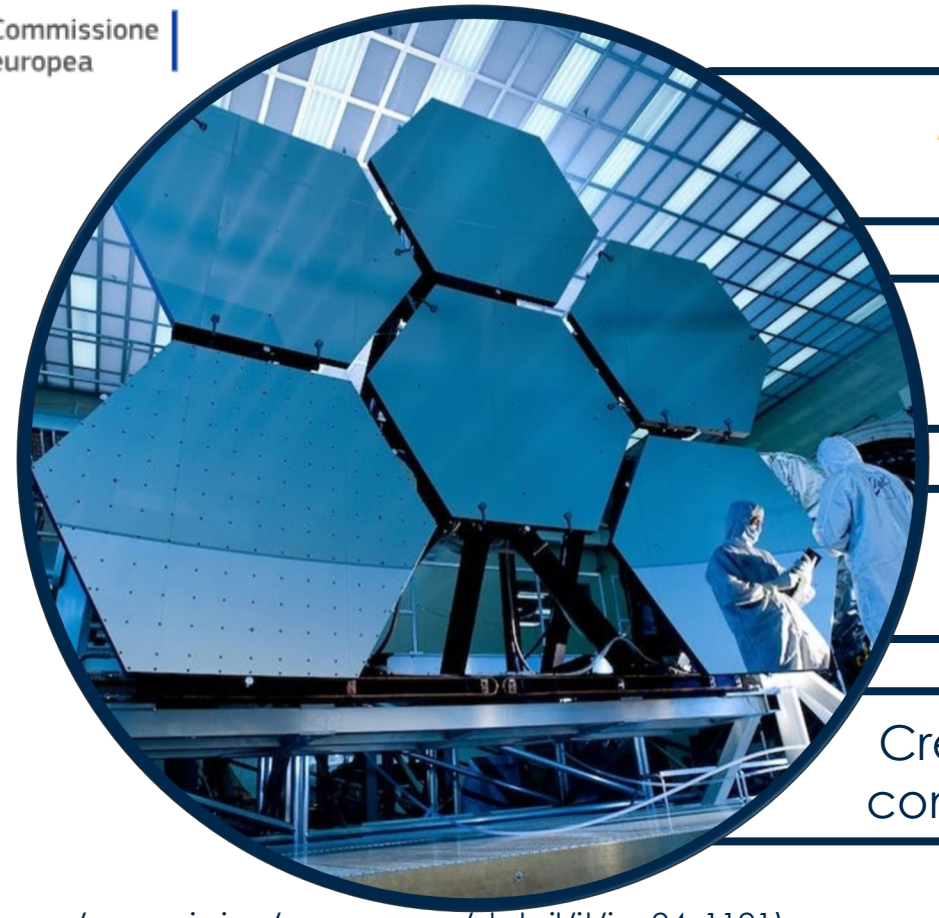
Unisciti alla rivoluzione dell'Ingegneria dei Materiali per l'Industria 4.0



Perché Ingegneria dei Materiali?

la Commissione europea promuove una strategia globale per progredire verso la leadership industriale dell'UE nel campo dei **materiali avanzati**, una **tecnologia abilitante** fondamentale per la duplice transizione verde e digitale

Commissione europea



Accelerare l'innovazione, dalla ricerca alla produzione

Promuovere materiali più **sostenibili e resilienti**.

Ridurre la dipendenza da risorse critiche grazie a **riciclo e riutilizzo**.

Creare **nuove opportunità** per settori come energia, mobilità e costruzioni.

(https://ec.europa.eu/commission/presscorner/detail/it/ip_24_1121)

In quali settori lavora l'Ingegnere dei Materiali?

Produzione di energia

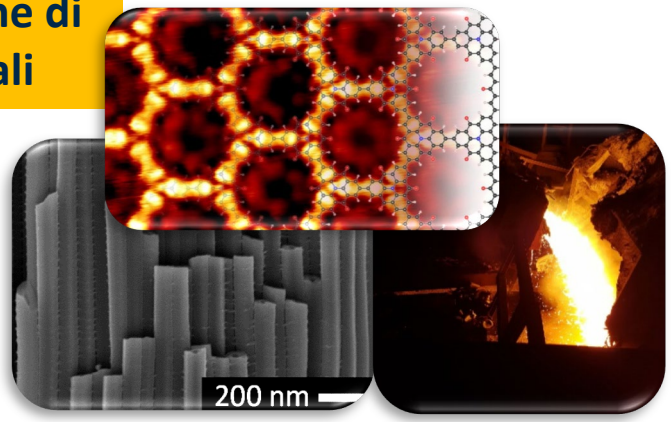
Biomedicale

Manifattura avanzata

Competenze trasversali al servizio delle imprese e della ricerca di frontiera

Abbigliamento sportivo & sensori

Produzione di materiali



Trasporti

Tre orientamenti + 1 percorso internazionale

Materiali Strutturali

Materiali Funzionali

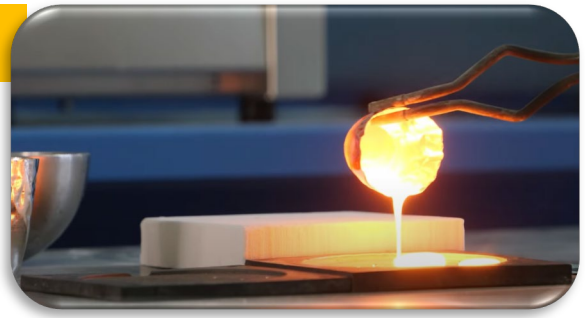
Materials Engineering for Advanced Manufacturing

meta4.0

Joint Master in Manufacturing 4.0

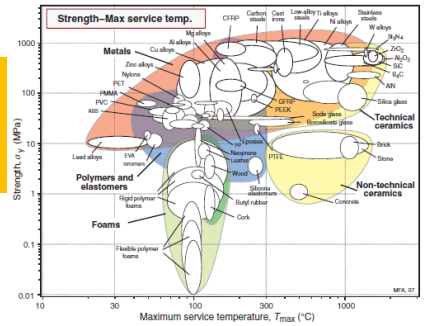
Materiali Strutturali & Materiali Funzionali - PRIMO ANNO

Ceramici Avanzati

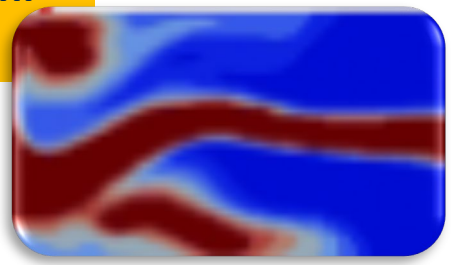


Impianti metallurgici

Ingegneria dei Materiali

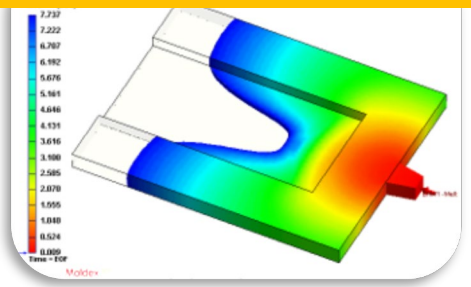


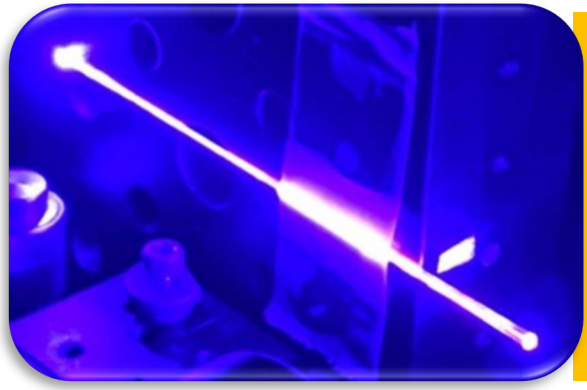
Chimica-fisica dei sistemi dispersi



Scienza e Tecnologia dei materiali compositi

Tecnologia dei materiali polimerici

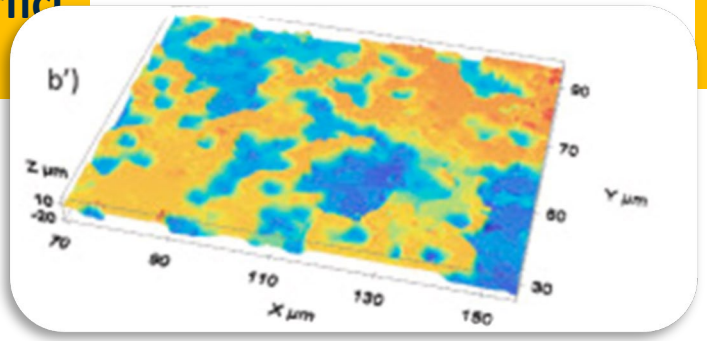




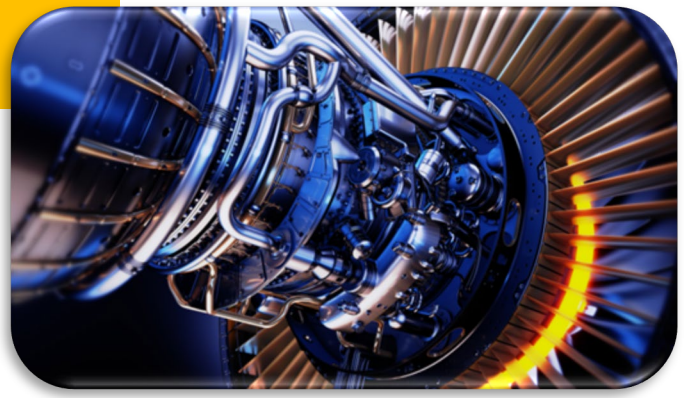
Scienza e Tecnologia dei materiali funzionali

Materiali Strutturali - SECONDO ANNO

Chimica, fisica e ingegneria delle superfici

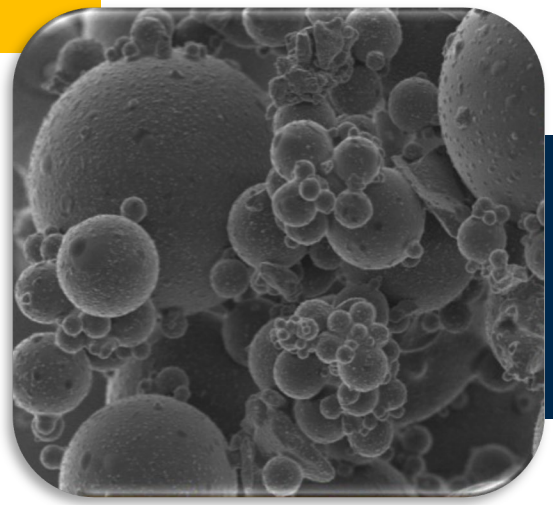


Strategie di sviluppo dei materiali



Materials and production process simulation

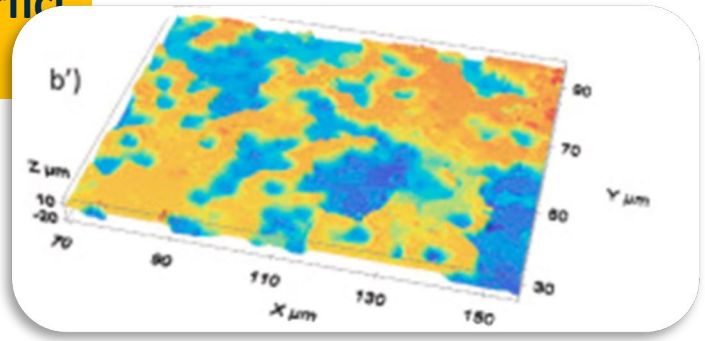
Metal forming technologies



Crediti liberi/
Tirocinio
Tesi

Materiali Funzionali - SECONDO ANNO

Chimica, fisica e ingegneria delle superfici



Biomateriali

Nanomaterials Engineering

Degradazione e riciclo dei materiali polimerici

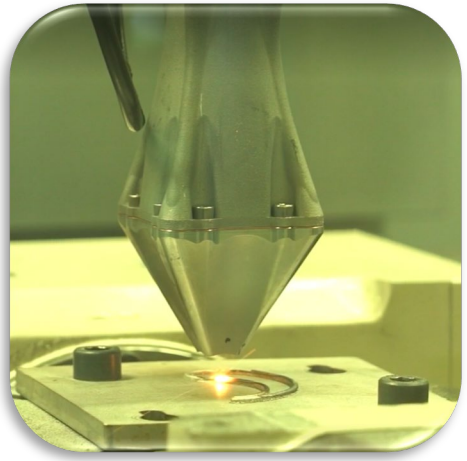
Crediti liberi/
Tirocinio
Tesi

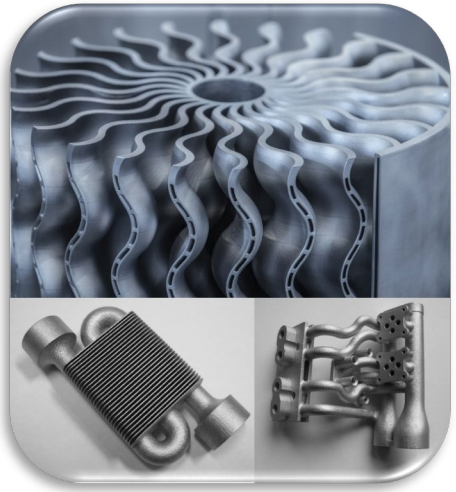
Materials Engineering for Advanced Manufacturing – PRIMO ANNO

FIRST YEAR

FIRST PERIOD

- Resources and Environmental Sustainability
- Integrated Manufacturing Systems
- Quality Control Techniques in Materials Engineering
- Materials for Advanced Manufacturing

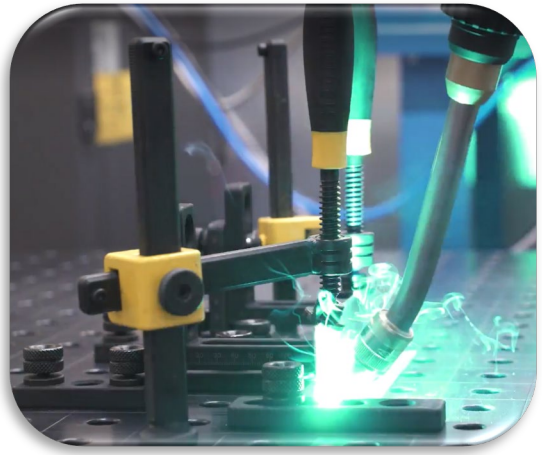


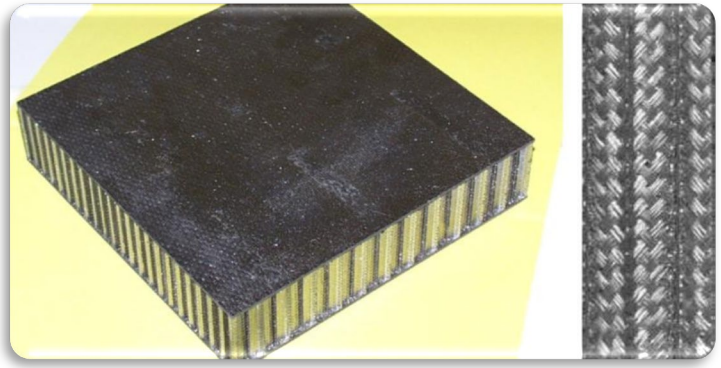


SECOND PERIOD

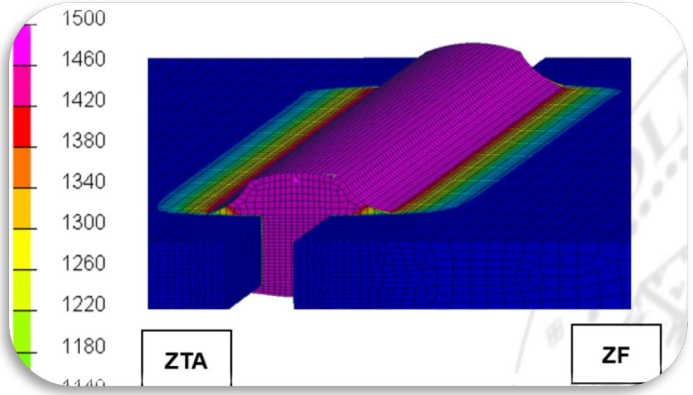
- Metals for Advanced Manufacturing
- Surface science and technology
- Materials Forming
- Sustainable Manufacturing

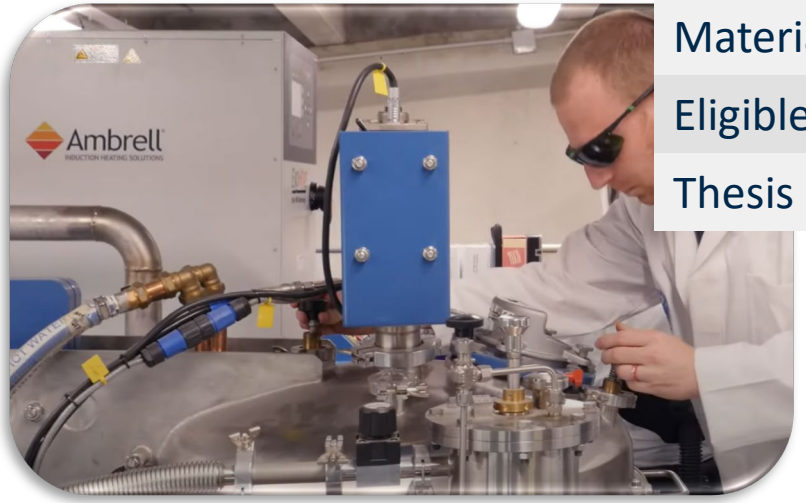
Materials Engineering for Advanced Manufacturing – SECONDO ANNO





SECOND YEAR
FIRST PERIOD
Materials integration & joining technologies
Economy and business organisation
Materials and production process simulation
SECOND PERIOD
Materials & Design
Eligible courses/Internship
Thesis (Final Project)





Crediti liberi (14 CFU) – Insegnamenti suggeriti

Materiali Strutturali

Insegnamento
Materiali per la fabbricazione additiva
Meccanica dei materiali/Metallurgia meccanica • Meccanica dei materiali ING-IND/14 (5 crediti) *(L.Peroni - 52 iscr.)* • Metallurgia meccanica ING-IND/21 (3 crediti) *(P.Matteis - 52 iscr.)*
Tecniche di fabbricazione additiva
Corrosione e protezione dei materiali
Failure analysis: methodology and practice
Sustainable Manufacturing

Data science and Machine Learning for Engineering Applications

Materiali Funzionali

Insegnamento
High-performance fibres for composites, sportswear and protection
Materiali per la fabbricazione additiva
Materials and characterizations for Micro and Nanotechnologies
Catalisi per l'ambiente e l'energia
Failure analysis: methodology and practice
Sustainable Manufacturing

Data science and Machine Learning for Engineering Applications

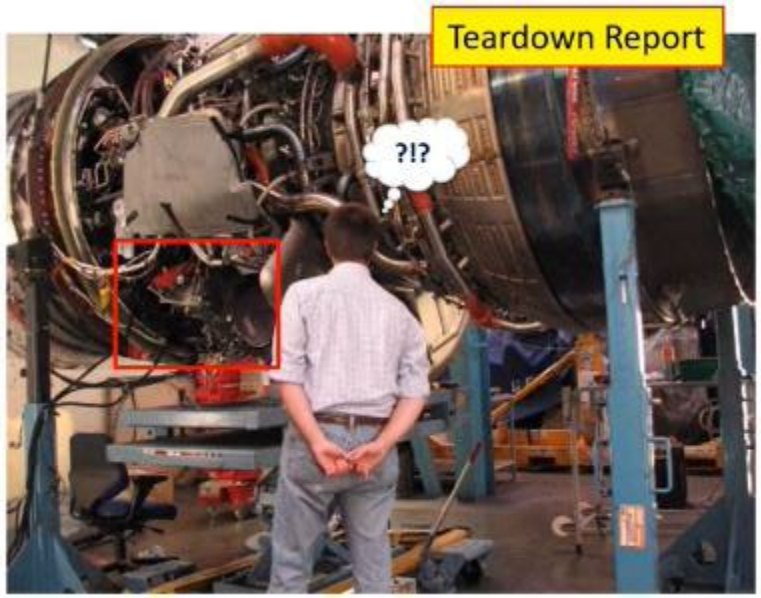
Materials Engineering for Advanced Manufacturing

Insegnamento
Raw and waste material engineering
Challenge
Design of Lightweight and composite structures
Failure analysis: methodology and practice

Data science and Machine Learning for Engineering Applications

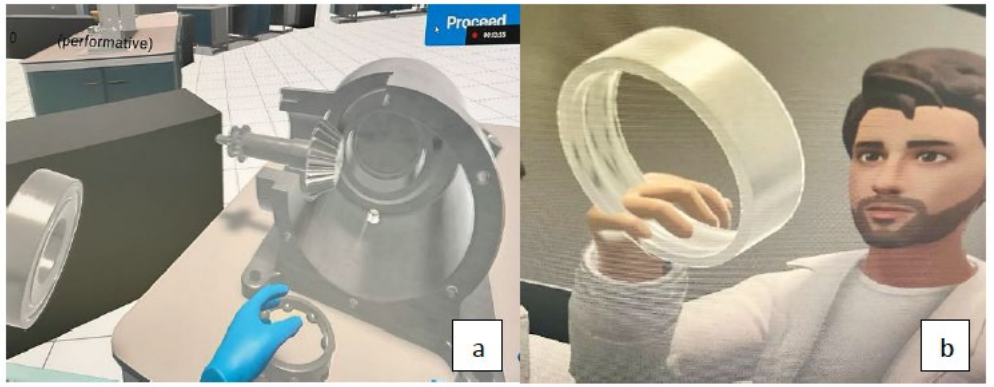
- Challenge (8 CFU);
- Tirocinio (8 CFU)

Failure analysis: methodology and practice



Courtesy of Luca Cassatella, Avio Aero, Rivalta (Italy)

Virtual laboratory



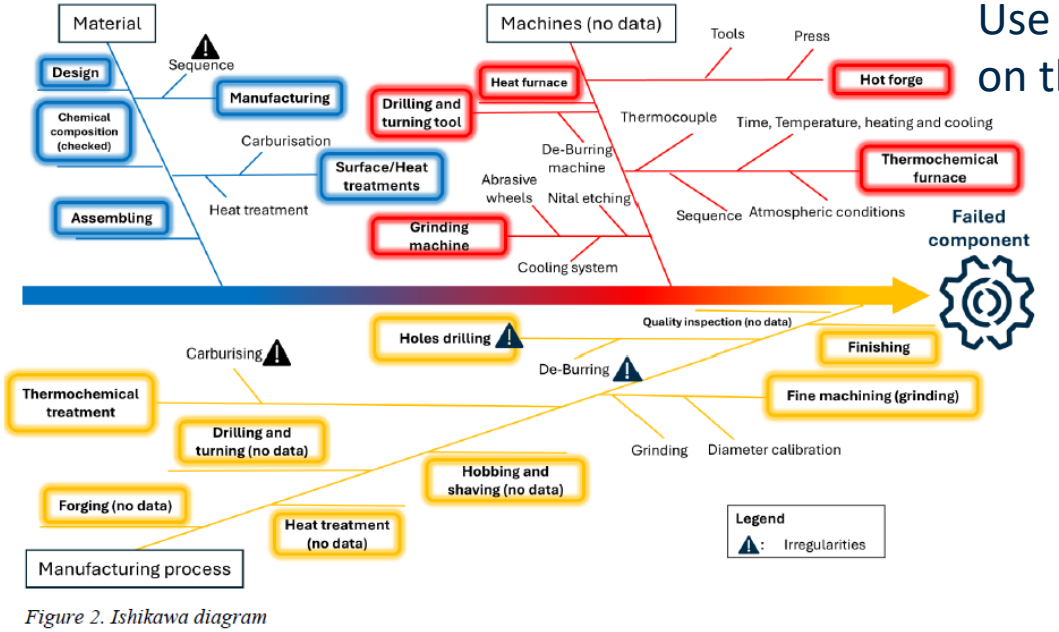
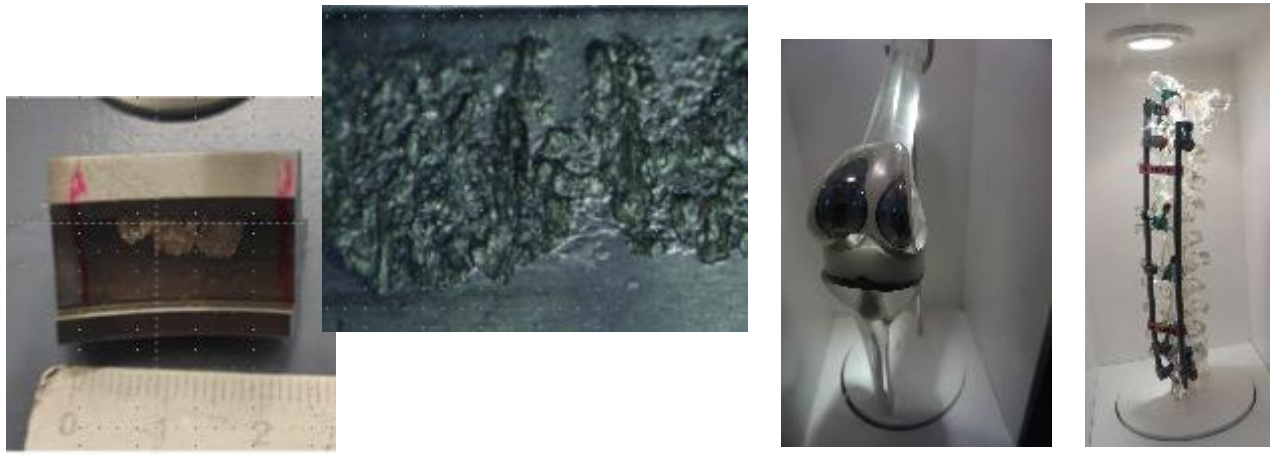


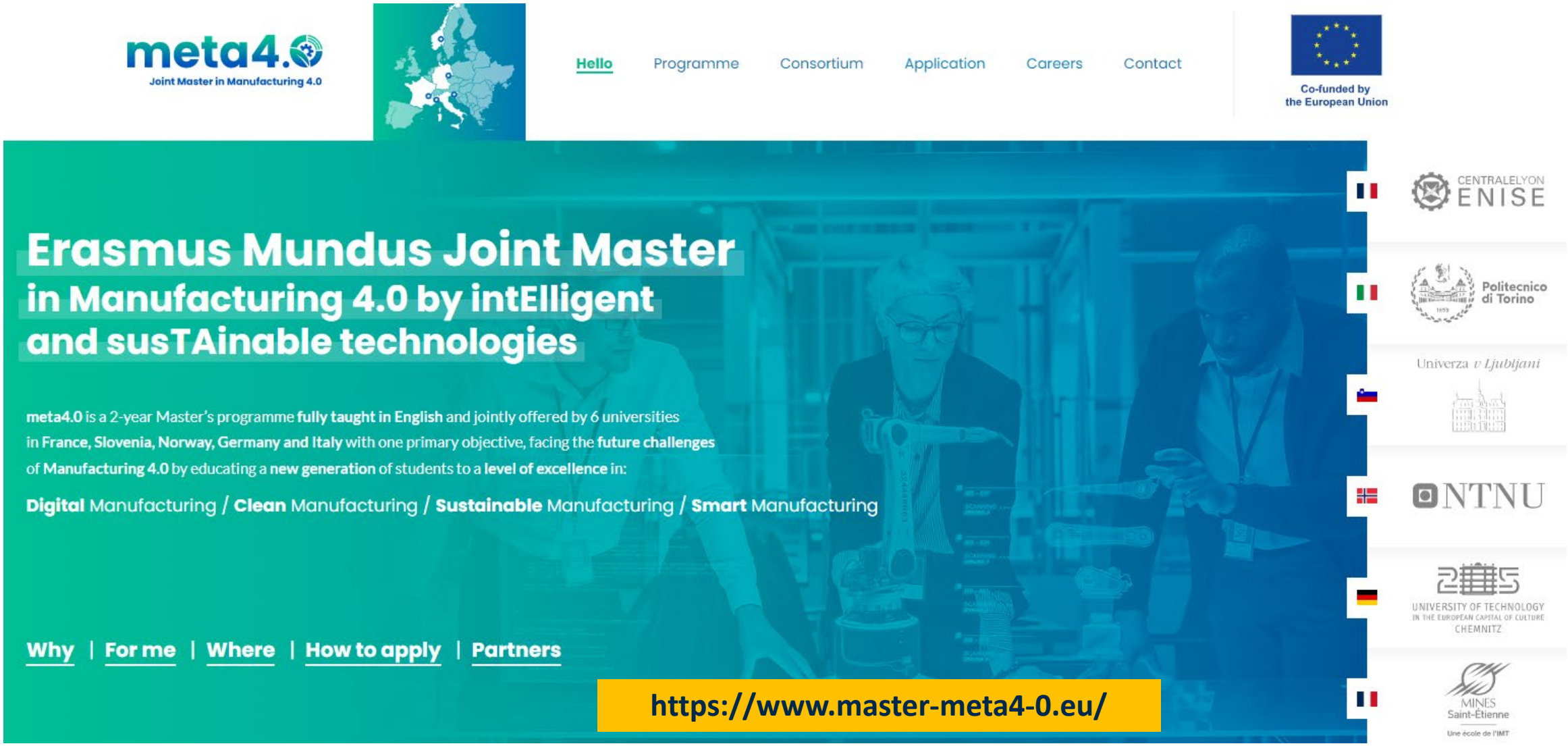
Figure 2. Ishikawa diagram

Use of tools to guess hypothesis on the effect-cause relationship

Hands on laboratory



Percorso Internazionale



meta4.0
Joint Master in Manufacturing 4.0

Hello | Programme | Consortium | Application | Careers | Contact

Co-funded by the European Union

Strongly involved industrial partners

This Joint Master programme was defined based on the **feedback of industry**.

Industrial partners from **various sectors** ranging from the aerospace and aircraft, automotive, energy, manufacture or automation industry indeed expressed their needs and their interest in **building such an excellence programme**.

Ascometal · BERNSTEIN · CIMES · FLENDER · framatome · GB · GKN · IPC · MAVEG · NOVAJET · PCI · SAFRAN · SKF · TIVOLY · COGNE Cogne Acciai Speciali

Involving industry in meta4.0 is also a priority and will be achieved by:

Hosting meta4.0 students

for an internship or proposing an **industrial related topic** for the Master thesis;

Participating and contributing

to **summer-schools** and **lectures** in several courses of each specialization track: they will especially be able to tackle

Being part of the different boards

such as the **recruitment board** of the **meta4.0** students, management board or **advisory board** providing expertise

meta4.0

Joint Master in Manufacturing 4.0

Year 1

Semester 1
Fundamentals on processes
30 ECTS
Details

Semester 2
Fundamentals on materials
30 ECTS
Details

Year 2

Semester 3
Specialization with 4 possible tracks
30 ECTS
Details

Semester 4
Work placement and Master thesis
30 ECTS
Details

Digital Manufacturing / **Clean** Manufacturing / **Sustainable** Manufacturing / **Smart** Manufacturing

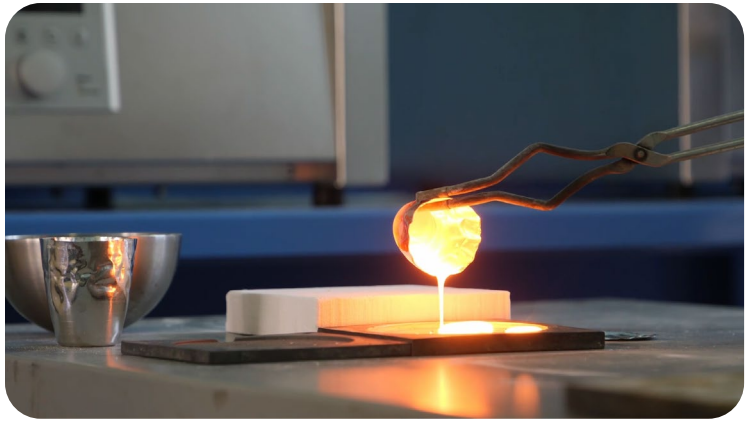
Semester 2

All the students will move to **Torino** (Italy) and will start their semester around the last week of February.

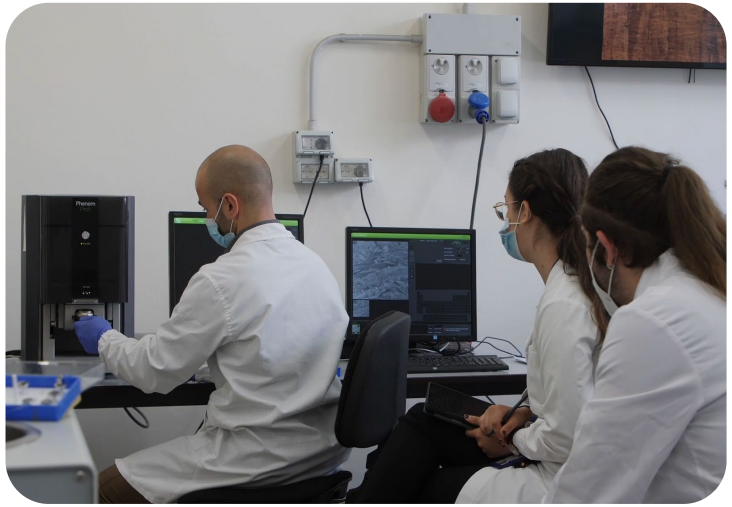
The **strength of meta4.0** is to fit its graduates with the best level of knowledge on Manufacturing but also on **Materials science.** Therefore, this semester will be dedicated to **materials for advanced manufacturing**, materials design, materials forming and surface science and technology, including techniques to investigate structure and properties of materials.

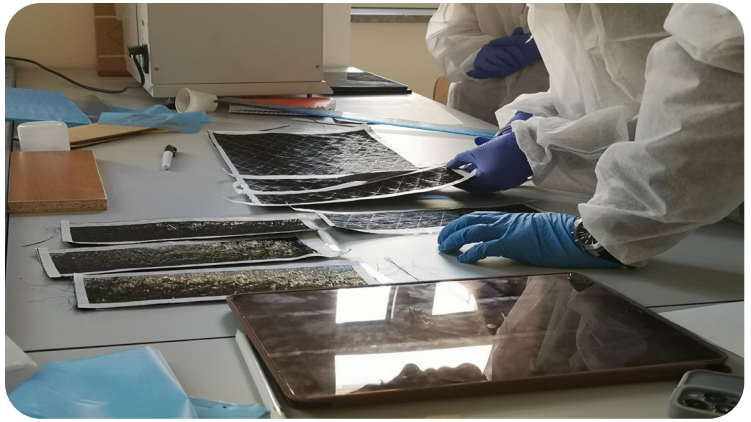
Italian language classes will be available on a non-credit basis.

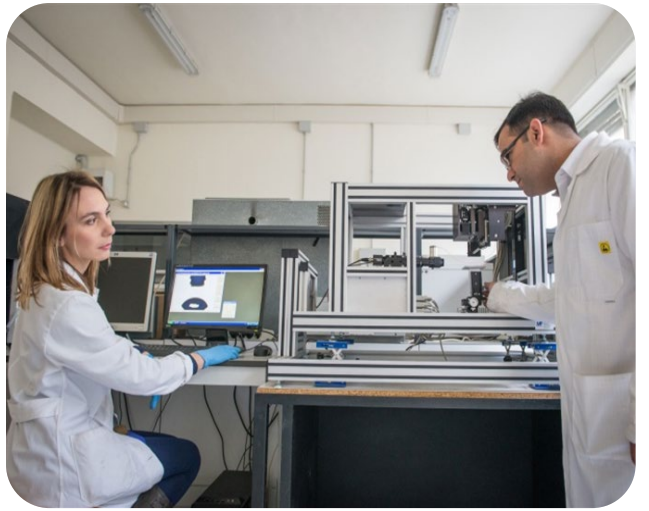
5 ECTS Materials for Advanced Manufacturing	10 ECTS Materials & Design	10 ECTS Materials forming
5 ECTS Surface science and technology		



Laboratori didattici e attività in team







Opportunità di Tirocinio, Incontri con Aziende e Visite Aziendali

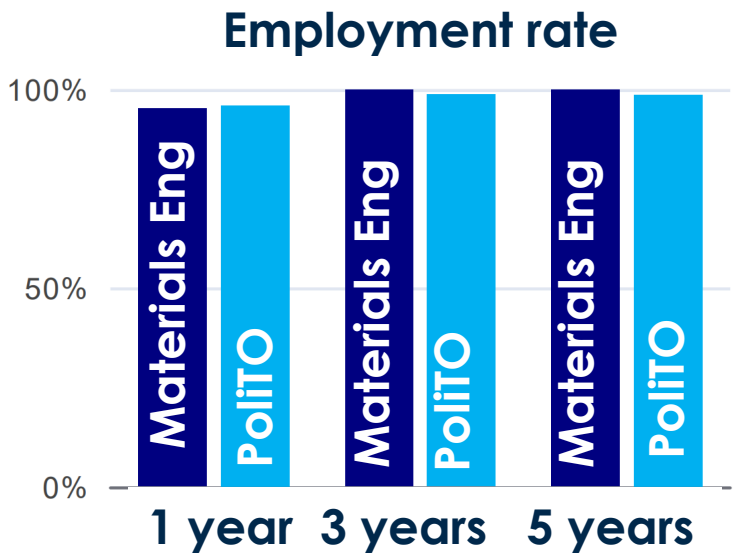
Studiare all'estero – mobilità Erasmus

- Possibilità di studiare all'estero per **uno o due semestri** in Università che supportano un programma di mobilità.
- Nel caso di programmi di **doppia laurea**, si richiede allo studente di trascorrere un semestre aggiuntivo nell'Università straniera (2 semestri al Politecnico di Torino + 3 semestri all'estero).

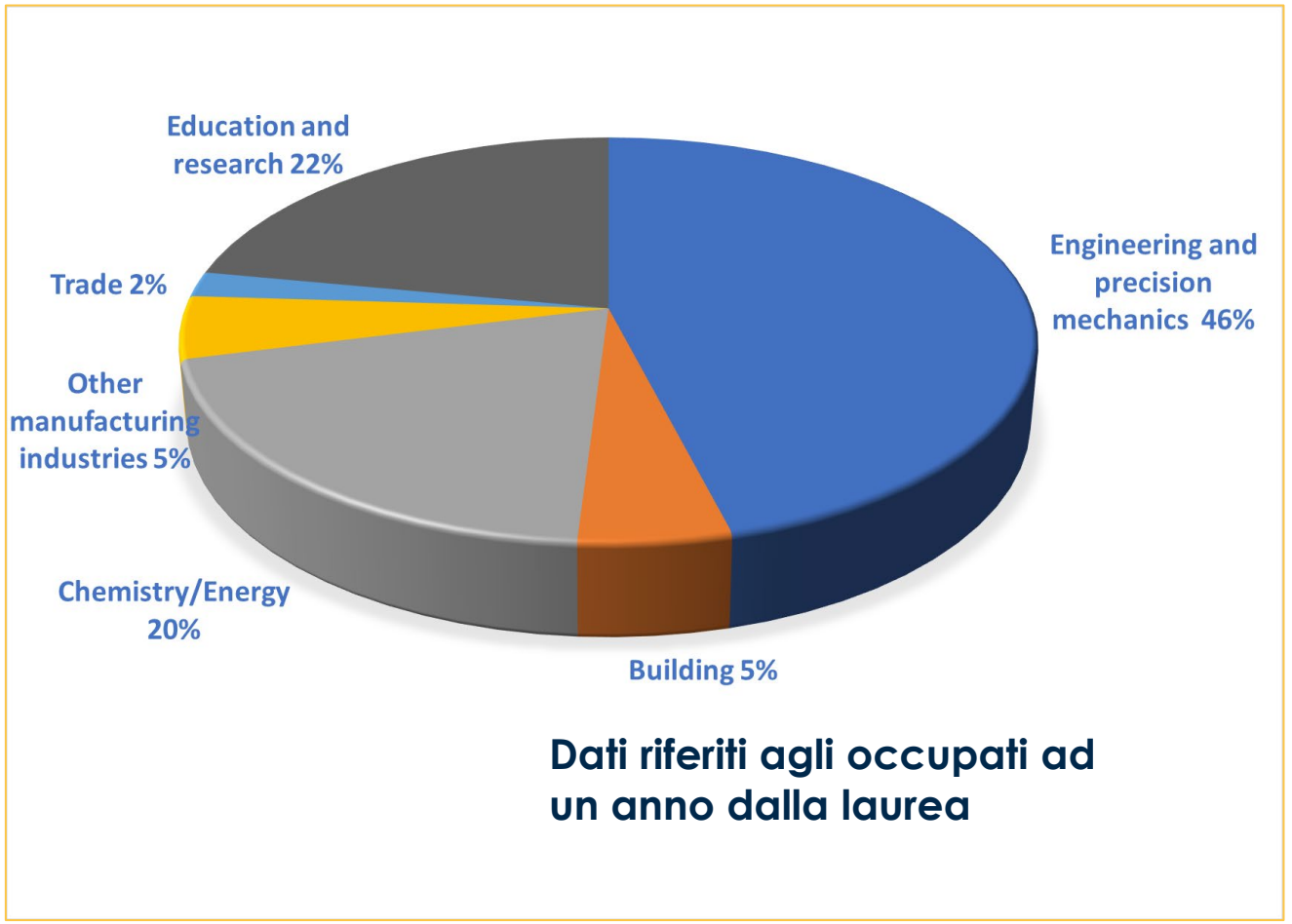
I NOSTRI PARTNERS ERASMUS

DOPPIO TITOLO

Dati occupazionali



Tempo dall'inizio della ricerca al reperimento del primo lavoro: **1,9 mesi**



Dati riferiti agli occupati ad un anno dalla laurea

Almalaurea- 2025

Approfondimento Università

Università e buste paga, ecco gli atenei con le prospettive di guadagno migliori

la Repubblica R.it

13 MAGGIO 2020

Secondo questo studio, il Reddito Annuale Lordo (RAL) medio nei primi anni di carriera, dell'ingegnere chimico e dei materiali è il secondo in Italia (valore medio di 32.063 €; +5,3% rispetto alla media nazionale)

L'incremento tra quel che si guadagna in gioventù (25-34 anni) e in età matura (45-54 anni) dell'ingegnere chimico e dei materiali è addirittura il migliore in Italia: 87%

Ulteriori fonti a supporto:
https://www.jobbydoo.it/stipendio/ingegnere-materiali
https://www.pedago.it/blog/quanto-guadagna-ingegnere-stipendio.htm
https://www.teknoring.com/news/marketing/stipendi-degli-ingegneri-i-settori-in-cui-si-guadagna-di-piu/

Alcuni dei nostri laureati magistrali


Alberto De Gioannini – MSc 1998
C.E.O. EFFETTO MARIPOSA Sagl


Arianna Miola - MSc 2010
Senior Cost Engineer @ MCLAREN AUTOMOTIVE Ltd


Alberta Aversa - MSc 2013, PhD
Professor @ PoliTO


Arianna Tomasi – MSc 2015
Advanced Materials Lead Engineer @ DANA GRAZIANO Srl


Mandaná Moshiri – MSc 2016, PhD
Senior Technology Manager @ LEGO


Danilo Lamberti – MSc 2018
Project Manager @ MARELLI


Michele Bertolino – MSc 2019
Process Engineer @ LUXOTTICA


Vito Martorella – MSc 2021
Mould & Curing Device Engineer @ PIRELLI

Intervista a Simone Lantean, Ph.D
Sun Lenses R&D Technical Project Manager @ Luxottica

Intervista a Dimitri Olivero, PhD
Quality and Innovation Director @ Cogne Acciai Speciali

Premi di Laurea & Premi di Eccellenza negli Studi

APPLY… se non sono uno studente di Ing dei Materiali POLITO?

- Moduli online di autoapprendimento (Scienza e Tecnologia dei Materiali + Struttura della Materia)
- Piano di studio personalizzato
- Integrazioni curriculari
- Maggiori info su «Bacheca» pagina web del CdLM

Pagina web del nostro CdLM

https://www.polito.it/didattica/corsi-di-laurea-magistrale/ingegneria-dei-materiali-per-l-industria-40

Referente del Corso di Studi
Ingegneria dei Materiali
Prof.ssa Milena Salvo
referente.materiali@polito.it

Per saperne di più seguici sui nostri canali social