

# Master of Science in Materials Science at the University of Padova

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# Summary

- Characteristics
- Courses
- Jobs
- Conclusions

# Characteristics (I)

The MSc in Materials Science of UNIPD aims to train

## MATERIALS SCIENTISTS

**experts in the properties, treatment and applications of materials**, who know how to combine laboratory skills with a deep theoretical analysis.

Great interdisciplinarity between several disciplines, which are required today by the most modern applications of materials in an ever-increasing number of advanced technological sectors.

It is a degree with a very high employment rate.

Graduates will be able to use and contribute to the **development and production of materials** characterized by specific functions, chemical and biochemical, mechanical and structural properties.

# Characteristics (II)

The lecturers are renewed scientists belonging to 4 Departments of UNIPD:

- ① Department of Chemical Sciences (DiSC)
- ② Department of Physics and Astronomy (DFA)
- ③ Department of Industrial Engineering (DII)
- ④ Department of Geosciences (DGS)

UNIPD is ranked 77 in Physics and Astronomy, 101 in Geology, 151 in Chemical Engineering, 201 in Chemistry  
From: QS World University Rankings 2025.

# Courses (I)



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I SEMESTRE		CFU	II SEMESTRE		CFU
I ANNO					
PHYSICAL CHEMISTRY OF MATERIALS	6	FUNDAMENTALS OF <b>NANOSCIENCE</b>	8		
PHYSICAL METHODS FOR MATERIALS CHARACTERIZATION WITH LABORATORY	10	ADVANCED LABORATORY FOR THE <b>PREPARATION AND CHARACTERIZATION</b> OF MATERIALS	10		
<b>ORGANIC FUNCTIONAL</b> MATERIALS	6	SURFACES STRUCTURE AND DYNAMIC	6		
PHYSICS AND TECHNOLOGY OF <b>SEMICONDUCTORS</b>	8				
OPZIONALI A SCELTA					
PHYSICS OF <b>DISORDERED MATERIALS</b>	6	<b>SUPERCONDUCTING</b> MATERIALS	6		
COMPUTATIONAL METHODS FOR MATERIALS SCIENCE	6	<b>SUSTAINABLE ENERGY</b> : MATERIALS AND TECHNOLOGIES	6		
CRYSTALLOCHEMISTRY OF MATERIALS FOR THE SUSTAINABLE BUILT ENVIRONMENT	6				
I I ANNO					
MATERIALS TECHNOLOGY	6	<b>OPZIONALI A SCELTA I SEMESTRE</b>			
ENGLISH LANGUAGE B2 (PRODUCTIVE SKILLS)	3	ELECTROCHEMISTRY OF MATERIALS	6		
PATENTS AND PRODUCTS DEVELOPMENT	2	<b>NANOFABRICATION</b>	6		
STAGE	2	OPTICS AND LASER PHYSICS	6		
		<b>OPTICS OF MATERIALS</b>	6		
FINAL EXAM			38		

1 CFU = 1 Credito Formativo Universitario = 8 hours of lesson.

# Jobs (I)

Graduates find jobs with **national** and **international manufacturing companies** operating in the following sectors:

- plastics, metal, ceramic and polymeric materials;
- materials for electronics, electricity, telecommunications and construction;
- mechanical or industrial engineering;
- metallurgy; health;
- energy;
- cultural heritage;
- automotive.

Locally, specific sectors of employment include precious metals, eyewear and sports materials.

The Materials Science graduate is usually placed in **quality control** and **research and development** departments, and is involved in managing experiments, advanced design, and production of materials. They may also deal with technological innovation and intellectual property.

## Net monthly salary

- starting: 1500 Euro
- after 3 years: 1600 Euro
- after 5 anni: 2100 Euro

from ALMALAUREA (2022).



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## Sbocchi lavorativi

### Scienziati dei Materiali oggi...

#### In ambito aziendale...

##### Farmaceutico

**Alessia**

**Technical Seller support**  
**Stevanato Group SpA**  
Piombino Dese (PD)



**Greshia**

**R&D**  
**Stevanato Group SpA**  
Piombino Dese (PD)



**Maria Chiara**

**Project Manager**  
**Stevanato Group SpA**  
Piombino Dese (PD)



**Fabio**

**Medical Device Manager**  
**Roche – Pharma R&D**  
Basilea, Svizzera



##### Automotive/illuminazione

**Verena**

**Quality Engineer**  
**HSL srl**  
Trento (TN)



**Lorenzo**

**Project Manager**  
**Osram**  
Monaco, Germania







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## Sbocchi lavorativi

### Scienziati dei Materiali oggi...

### In ambito aziendale...

#### Materie plastiche

**Diego**

**Responsabile Laboratorio  
Rossignol Lange Srl  
Montebelluna (TV)**



**Stefano**

**Director R&D  
Aline Inc.  
California (USA)**



#### Vetro

**Michela**

**Laboratorio Caratterizzazione  
Stazione Sperimentale del  
Vetro  
Venezia (VE)**



#### Manufatturiero/Metallurgico

**Gianluca**

**Responsabile Tecnico Metalli  
Preziosi di Made in Vicenza  
Vicenza (VI)**



**Michele**

**Responsabile Metallurgia  
Foc Ciscato Spa  
Velo D'Astico (VI)**



**Lorenzo**

**Product Qualification  
Trumpf Additive Manufacturing  
Schio (VI)**





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## Sbocchi lavorativi

### Scienziati dei Materiali oggi...

### In centri di ricerca...

**Giovanni**  
**Ricamatore**  
**IIT**  
Genova



**Stefano**  
**Professore**  
**Dip. Scienze Chimiche, UNIPD**  
Padova



**Elisa**  
**Professoressa**  
**Université Paris Cité**  
Paris (France)



**Gianluca**  
**Post-doc**  
**Cambridge Display Tech.**  
Cambridge, UK



**Roberto**  
**Ricamatore**  
**Politecnico Milano**  
Milano

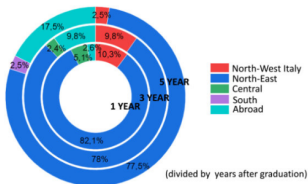


**Davide**  
**Ricamatore**  
**Dip. Fisica e Astronomia, UNIPD**  
Padova



## Sbocchi lavorativi

### Distribuzione geografica:



## Nord Italia:

3M  
TOYOTA  
LUMILEDS  
Acclity  
illuminA  
Incorez  
Laerdal  
CNRS  
AL  
HORIZONS OPTICAL  
AIR LIQUIDE  
H2B  
Alfa  
centrotherm  
INDQ  
imec ASML  
sigma  
Brooks

# Conclusions

The University of Padua is looking for motivated students who want to become **materials scientists**.

Further information on the web page of the **Department of Chemical Sciences** of the University of Padua:

<https://www.chimica.unipd.it/en/courses/second-cycle-degrees/master-degrees-materials-science>

And also on the website of the **School of Sciences** of the University of Padua:

<http://www.scienze.unipd.it>

**THANKS FOR YOUR ATTENTION!**