



MASTER (LM) DEGREE COURSE IN

MATERIALS SCIENCE

Curriculum Materials Science

Study programme for students enrolled in the academic year 2025-2026

1st YEAR	
MANDATORY UNITS	CREDITS
PHYSICAL CHEMISTRY OF MATERIALS	6
PHYSICAL METHODS FOR MATERIALS CHARACTERIZATION WITH LABORATORY	10
ORGANIC FUNCTIONAL MATERIALS	6
PHYSICS AND TECHNOLOGY OF SEMICONDUCTORS	8
FUNDAMENTALS OF NANOSCIENCE	8
ADVANCED LABORATORY FOR THE PREPARATION AND CHARACTERIZATION OF MATERIALS	10
SURFACE STRUCTURE AND DYNAMICS	6
2nd YEAR	
MANDATORY UNITS	CREDITS
MATERIALS TECHNOLOGY	6
ESSENTIAL INDUSTRY SKILLS FOR SCIENTISTS	2
1 FREE-CHOICE UNIT AMONG THE FOLLOWING:	CREDITS
COMPUTATIONAL METHODS FOR MATERIALS SCIENCE	6
CRYSTALCHEMISTRY OF MATERIALS FOR THE SUSTAINABLE BUILT ENVIRONMENT	6
PHYSICS OF DISORDERED MATERIALS	6
SUPERCONDUCTING MATERIALS	6
SUSTAINABLE ENERGY: MATERIALS AND TECHNOLOGIES	6
ELECTROCHEMISTRY OF MATERIALS	6
NANOFABRICATION	6
OPTICS AND LASER PHYSICS	6
OPTICS OF MATERIALS	6

STAGE	2
12 ADDITIONAL FREE-CHOICE CREDITS	12
FINAL THESIS/DISSERTATION	38
OPTIONAL UNIT	
ENGLISH LANGUAGE B2 (PRODUCTIVE SKILLS)	3

ANY FURTHER NOTES

- Attendance requirement: according to the didactic regulation of the degree course, attendance is recommended but not mandatory for lessons, but it is mandatory for laboratories for 90% of the hours
- free-choice credits can be chosen from all those offered by the Master degree course in Materials science
- free-choice credits can be chosen among the university's educational offer as long as they are consistent with the educational path

MASTER (LM) DEGREE COURSE IN

MATERIALS SCIENCE

Curriculum Materials Science DD

Study programme for students enrolled in the academic year 2025-2026

1st YEAR	
MANDATORY UNITS	CREDITS
PHYSICAL CHEMISTRY OF MATERIALS	6
PHYSICAL METHODS FOR MATERIALS CHARACTERIZATION WITH LABORATORY	10
ORGANIC FUNCTIONAL MATERIALS	6
PHYSICS AND TECHNOLOGY OF SEMICONDUCTORS	8
FUNDAMENTALS OF NANOSCIENCE	8
ADVANCED LABORATORY FOR THE PREPARATION AND CHARACTERIZATION OF MATERIALS	10
SURFACE STRUCTURE AND DYNAMICS	6
2nd YEAR	
MANDATORY UNITS	CREDITS
MATERIALS TECHNOLOGY	6
ESSENTIAL INDUSTRY SKILLS FOR SCIENTISTS	2
1 FREE-CHOICE UNIT AMONG THE FOLLOWING:	CREDITS
COMPUTATIONAL METHODS FOR MATERIALS SCIENCE	6
CRYSTALCHEMISTRY OF MATERIALS FOR THE SUSTAINABLE BUILT ENVIRONMENT	6
PHYSICS OF DISORDERED MATERIALS	6
SUPERCONDUCTING MATERIALS	6
SUSTAINABLE ENERGY: MATERIALS AND TECHNOLOGIES	6
ELECTROCHEMISTRY OF MATERIALS	6
NANOFABRICATION	6
OPTICS AND LASER PHYSICS	6
OPTICS OF MATERIALS	6
12 ADDITIONAL FREE-CHOICE CREDITS	12
FINAL THESIS/DISSERTATION	40

ANY FURTHER NOTES

- Attendance requirement: according to the didactic regulation of the degree course, attendance is recommended but not mandatory for lessons, but it is mandatory for laboratories for 90% of the hours
- the Master degree course in Materials Science offers students the opportunity to obtain a double degree through an agreement between the University of Padua and the Justus Liebig University of Giessen (Germany). This program allows students to earn both the Master degree in Materials Science at UniPD and the Master of Science in Materials Science at JLU.
- students enrolled in the Materials Science DD curriculum will spend the second year at the partner university. During this period, they must acquire 60 ECTS credits completing their thesis internship in one of the research laboratories at the partner university
- selections for the double degree curriculum take place during the first year of the Master degree course in Materials Science among students who are regularly enrolled
- free-choice credits can be chosen from all those offered by the Master degree course
- free-choice credits can be chosen among the university's educational offer as long as they are consistent with the educational path