Department of Materials Science and Engineering: Course Catalog for Exchange Students

University of Crete, Heraklion, Greece | Academic Year 2025/2026

The Department of Materials Science and Engineering offers a comprehensive curriculum for visiting students through the Erasmus+ program. To assist students attending for a single semester, the following modules are organized by their designated semester (Fall or Spring).

Fall Semester (Semester A)

Materials Structure & Characterization

- **Introduction to Crystallography (Code: MEMY-445)**
- **Crystal Chemistry (Code: MEMY-453)**

Advanced Functional Materials & Electronics

- **Advanced Solid-State Materials and Nanostructures (Code: MEMY-501)**
- **Advanced Organic Materials for Energy and Environment (Code: MEMY-582)**
- **Foundations of Modern Optics (Code: MEMY-901)**
- **Optoelectronics and Laser (Code: MEMY-580)**

Biomaterials & Biomedical Engineering

- **Bio-organic Nanostructures - Supramolecular Chemistry (Code: MEMY-598)**
- **Biological Materials and Synthetic Biomaterials (Code: MEMY-491)**
- **Sustainable (Bio)polymers (Code: MEMY-428)**

Computational & Theoretical Materials Science

- **Theoretical Materials Science and Mechanics of Materials (Code: MEMY-502)**

Polymers & Soft Matter

- **Elements of Colloidal Dispersions (Code: MEMY-471)**

Spring Semester (Semester B)

Polymers & Soft Matter

- **Soft Matter and Mechanics (Code: MEMY-503)**
- **Polymer Physics (Code: MEMY-450)**

- **Polymer Synthesis (Code: MEMY-452)**
- **Rheology and Polymer Processing (Code: MEMY-456)**

Biomaterials & Biomedical Engineering

- **Biomaterials and Biomedical Engineering (Code: MEMY-504)**
- **Tissue Engineering (Code: MEMY-496)**

Computational & Theoretical Materials Science

- **Computational Materials Science (Code: MEMY-447)**
- **Computational Materials Science II (Code: MEMY-512)**

Advanced Functional Materials & Electronics

- **Optical Engineering and Metrology (Code: MEMY-902)**
- **Photonic Materials and Devices (Code: MEMY-490)**

Materials Structure & Characterization

- **Elements of Magnetic Materials (Code: MEMY-483)**
- **Transmission Electron Microscopy (Code: MEMY-446)**

Application & Inquiries

For general information regarding the application process, prospective students are encouraged to contact the university's Erasmus+ office. For specific inquiries about the department's curriculum, you may also contact the secretariat at secretariat@materials.uoc.gr.